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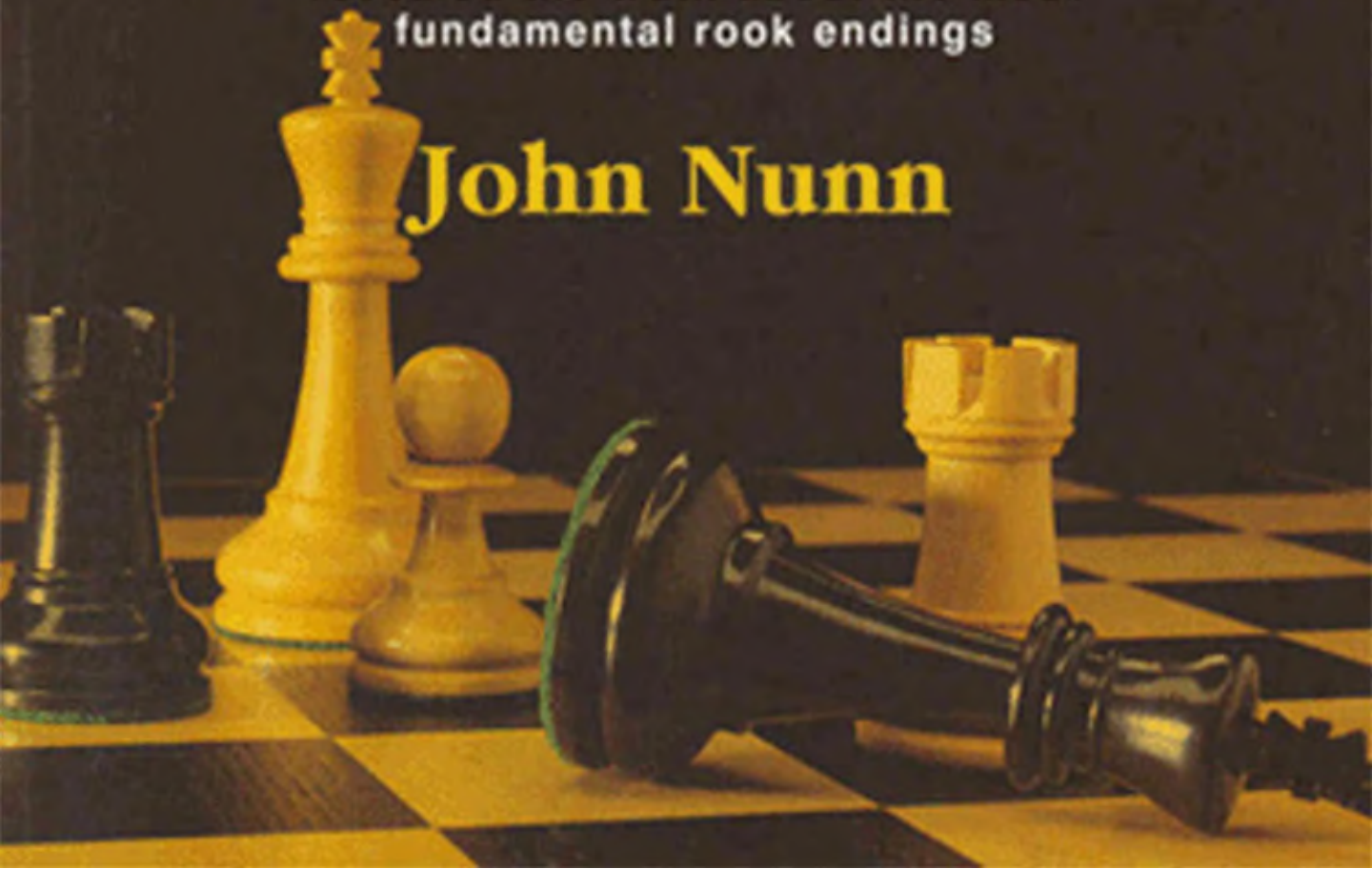
# SECRETS OF ROOK ENDINGS

An expanded edition of the book that first revealed the truth about the most fundamental rook endings

John Nunn



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# Secrets of Rook Endings

John Nunn

GAMBIT

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# Explanation of Symbols

**Important note:** Readers should devote particular attention to this page, because throughout the book I will use two common chess symbols in a non-standard way. The symbols concerned are the exclamation mark '!' and the question mark '?'. These symbols are normally bestowed in an arbitrary way by authors; some scatter them lavishly through the text, while others dole them out sparingly. However, in this book these two symbols have precise definitions which do not depend on the author's whim.

The exclamation mark ! after a move means that this move is the only one not to change the result of the position. For example, in the usual case that White has the rook and pawn, '1 ♖a3!' implies that ♖a3 is the only winning move, while '1...♖b5!' means that ...♖b5 is the only drawing move.

The use of the word 'only' needs to be clarified. I consider a (white) winning move to be unique if any other move preserving the win allows a defence by which Black can force White to return to the current position in order to win. In other words suppose that White has a winning move, but he can also repeat the position before embarking on the winning continuation. In this case the winning move is still marked unique, even though the repetition also retains the win.

The use of '?' is easier to explain: a move receives a question mark if it changes the result of the position. Of course, a move can only change the result of a position for the worse.

By adopting these special meanings, a great deal of information can be presented in an economical form.

One other point deserves explanation. Beneath each diagram you will find symbols such as '+/–'. Once again this is a method of displaying information compactly. The symbol before the slash '/' gives the result of the position with White to move. This result is given from White's point of view, so that a plus before the slash means that White to play wins, an equals sign means White to play draws and a minus means that White to play loses. The symbol after the slash gives the result with Black to move, from Black's point of view. Thus the symbol above, '+/–', means that White wins whoever moves first. To take another example, '=/–' means that White to play draws, but with Black to play White wins. Sometimes we only give the result with one player to move, for example '/=' means that Black to play draws. Normally this is because the position makes no real sense with the other player to move, for example Black's king might be in check.

# Introduction to the First Edition

There is little novelty in the world of chess literature. A new book on a particular opening may be a useful reference work, but there is usually not much to distinguish such a book from the hundreds of similar publications.

This book, however, has something new to offer, something which has never before been possible. The novel feature I am referring to is that, with the possible exception of a few printing errors, all the moves in it are guaranteed to be accurate.

Readers will probably have already guessed that this is made possible by that icon of our age, the computer. It would take too long to explain in detail how a computer can construct an endgame database, but in outline the method is to work backwards from certain end, or 'terminal', positions, calculating the result of more and more positions until eventually every legal position has been evaluated. The terminal positions may be simply the mating positions, but more often they are the positions which arise when the material balance has been changed. For example, with ♖+♙ v ♖, the terminal positions are those in which either the pawn promotes or a unit has been captured. The database cannot be constructed unless the computer has the means to evaluate these terminal positions. In practice, this means that one must first construct databases for all the endings which might be derived from ♖+♙ v ♖ (in other words ♖+♘ v ♖, ♖+♗ v ♖, ♖+♖ v ♖, ♖+♕ v ♖, ♙ v ♖, ♖+♙ v nothing and ♖ v ♖). These databases may require the construction of further derivative databases, from which the reader may conclude that creating an endgame database is not a trivial undertaking. At the time of writing this method is largely restricted to four- and five-piece endgames. A few six-piece databases have been temporarily created, but this territory is largely uncharted.

The construction of endgame databases was pioneered by Ken Thompson at Bell Laboratories. Recently he has made many of his efforts available to a wider audience by using a standard data-compression technique to fit several databases onto a CD-ROM (a read-only computer storage medium which can fit about 600 megabytes on what is basically a compact disc). The ♖+♙ v ♖ database occupies roughly 60 megabytes of storage, or about 10% of the disc. The rest of the disc is filled with other endgame databases, including the derivative databases mentioned above.

The end result is a list of all legal positions with ♖+♙ v ♖. Any position may be checked against the database and the computer will respond by either saying that the position is a draw, or that the ♖+♙ side (we will suppose this is White)

wins. In the latter case it also gives the number of moves in which White can force a 'terminal' position. For the sake of simplicity we may regard this as the number of moves required to promote the pawn, although in a few cases the two numbers are not identical. In some very rare situations the rook can beat the rook and pawn, but these cases are of no theoretical importance and the Ken Thompson database doesn't distinguish them from the drawn positions because this would have required extra storage.

If this had been the only means of interrogating the database then *Secrets of Rook Endings* would have required six years rather than six months to write. Fortunately, Danish programmer Lars Rasmussen created a 'user-friendly' interface program which displays a much wider range of information. Every move in this book was checked using the Ken Thompson database.

Some readers may be wondering why the book needed a grandmaster author, since it might seem that the computer could have been programmed to write the book as well as create the database! However, anyone who has used a large database will know the problems involved in extracting anything useful from megabyte after megabyte of raw data. The human author had to perform two main functions. The first was to select the important, useful or entertaining information from the huge mass of uninteresting material. The second, more significant, function was to act as an interpreter. All the computer can do is say which moves win and how long the win will take. It cannot explain why some moves win while other, apparently similar, moves do not. It is also unable to derive characteristic themes which recur time and time again. These are the ideas which over-the-board players should know in order to produce the maximum improvement in their endgame ability using minimum effort.

What, then, will the reader find in this book? First of all, it deals only with the ending of ♖+♙ v ♖. This might seem to be unduly restrictive, but the theory of ♖+♙ v ♖ underpins the entire theory of rook endings. Famous endgame works, such as Chéron's *Lehr- und Handbuch der Endspiele*, devote upwards of 150 pages to ♖+♙ v ♖, showing how fundamental it is to all rook endings.

The material is divided up according to the location of the pawn. The a-pawn comes first, starting with the pawn on a7 and gradually working back down the file. This is logical, because a position with the pawn on a6 cannot be understood unless you know whether playing a7 leads to a win.

There are three types of position in this book. The first group consists of standard positions which have already been tackled by earlier analysts. In this case the analysis is corrected and expanded in accordance with the information provided by the database. The second group consists of game endings, which are often analysed here for the first time. I made a database search for games containing the ending of ♖+♙ v ♖, but unfortunately many of these contained play of such low quality that there was no point including them.

The third group consists of new positions which I discovered as a result of my work with the database.

One special class of positions deserves a more detailed explanation. Over-the-board players are familiar with the concept of zugzwang, in which the player to move is obliged to weaken his position. They may not be so familiar with the concept of a reciprocal zugzwang. In a normal zugzwang position it doesn't matter much who is to move, because the superior side usually has a waiting move with which he can pass if it is his turn to move. This is not so in a reciprocal zugzwang, which may be defined as a position in which whoever moves first has to weaken his position. In an ending of ♖+♙ v ♖ we may be even more precise. Assuming that White has the rook and pawn, a reciprocal zugzwang is a position in which Black to play loses, but White to play can only draw. In other words, not only is Black in zugzwang if it is his turn to move, but White to play has no waiting move to maintain the zugzwang, so he is also in zugzwang if it is his turn to move (hence the term 'reciprocal zugzwang').

I asked a number of grandmasters how many positions of reciprocal zugzwang they thought existed in the ending of ♖+♙ v ♖. Most answers were in the range 5-25. In fact there are 209 such positions, and these positions turn out to possess a surprising degree of importance. It is incredible how often the analysis of a perfectly ordinary position depends in a subtle way on a position of reciprocal zugzwang. Of course this doesn't happen with basic positions, but it often occurs with more complex positions.

I like to think of these positions in the following way. In most positions the play can be understood in normal chess terms; White makes a move which contains a threat and Black tries to counter this threat. The players struggle to gain as much time as possible. But near to a position of reciprocal zugzwang this typical chess logic breaks down; instead the players may try to lose time, or to delay making threats. This apparently paradoxical behaviour can only be understood if one is aware of the underlying reciprocal zugzwang position.

All 209 positions are mentioned in the text. Many have their own diagrams. This is not only because of their importance, but for two other reasons. First of all, it is impossible to believe that some of these harmless-looking positions really are reciprocal zugzwang. Only deep analysis uncovers the subtle logic underpinning them. The fact that very few of these positions have been discovered by human analysts is a tribute to the almost inexhaustible nature of chess. The other reason is that in many sections there are no good practical examples of messy, over-the-board type positions. The reciprocal zugzwang positions provide good examples with which to apply the analysis of the standard positions given earlier in each chapter.

Readers will have noticed the qualifier 'almost' in the previous paragraph, and some may be worried that the ever-encroaching computer will eventually take

the soul out of chess. I admit this is a danger, and in some sense the theory of these basic endings is frozen now that databases exist. Doubtless there will still be many discoveries in the ending of ♖+♙ v ♖, but I believe that this book gives the definitive answers for the most important aspects of this ending.

Each section ends with a paragraph of 'Practical tips'. This is intended to point the player with limited time in the direction of those positions which have the greatest relevance for over-the-board play.

Most analysts have tended to tackle 'standard' positions, for example exploring how many files Black's king has to be cut off in order to win a particular type of position. Chéron, for example, produced very accurate analyses of such positions. The accuracy falls off dramatically when analysts tackle awkward over-the-board positions. The Yugoslav *Encyclopaedia of Chess Endings* (the rook ending volume was published in 1985 and is referred to as *ECE* in this book) is generally good on the standard positions, taking most of the analysis from Grigoriev, Chéron and others, but the over-the-board positions are often poorly analysed.

Although *Secrets of Rook Endings* was a great deal of work, much more work than writing a 'standard' opening book, it was an exhilarating experience. Using a modern-day Silicon Oracle is at the same time stimulating and humbling. Stimulating, because your every question can be answered in a few seconds, but humbling because, in the tradition of oracles, the answers often proved so cryptic that it would take an hour to uncover the logic underlying them.

Finally, I would like to acknowledge the help I have received in producing this book. First of all I owe a great debt to Ken Thompson, who not only constructed the databases but also responded to various requests for further information. Secondly, without Lars Rasmussen's program this book would never have been written. Finally, the people at ChessBase have been a great help throughout.

# Introduction to the Second Edition

The publication of the first edition of this book in 1992 represented an innovation in chess literature. Based on the Ken Thompson computer databases, the ending of ♖+♙ vs ♖ was presented in a new light, based on the perfect knowledge of the 'Silicon Oracle'. There were two sequels (*Secrets of Pawnless Endings* and *Secrets of Minor-Piece Endings*); together, the three books covered the most important five-man endings, except for ♕+♙ v ♕. Unfortunately, *Secrets of Rook Endings* went out of print, and it has not been available for some years. I was therefore delighted when Gambit Publications suggested a new, enlarged edition, and I tackled the task of preparing it enthusiastically.

The response to the first edition of this book was mostly positive, and it received a number of flattering reviews. However, there were a few dissenting voices. Writing in the magazine *New In Chess*, Grandmaster Curt Hansen commented "So, this book is the ultimate answer for the endgames that are analysed. I do not want to hide my feeling that I find this procedure extremely repulsive." To summarize Curt Hansen's argument, his view was that chess is fascinating because it poses problems for which, in many cases, no definite answer can be given. If you can simply enter a position in a computer and immediately obtain the reply 'White mates in 57 moves', then the game loses much of its magic. The passage of time allows this point to be viewed with a little more perspective. Endgame databases have evolved from an astonishing novelty to a widely-used tool. Today, an author writing about the endgame would have to be either foolhardy or extremely brave to go into print without checking his work against the database. Many technological innovations go through a similar transformation. To take just one example, many reacted with revulsion to the introduction of *in vitro* fertilization (test-tube babies). This procedure gradually became accepted, and now there is an outcry if, for reasons of cost, it is not available to all who desire it.

In fact the fear that chess would increasingly become 'frozen in silicon' has so far not been realized, and any future threat is perceived as coming more from the increasing strength of playing programs than from endgame databases. Although a few six-man databases have been constructed, they are so large that they have not been made publicly available. Moreover, while several five-man endgames are of great practical importance, there are so many six-man endgames that each individual one is of limited relevance for over-the-board or postal play. Doubtless,

technology will advance to the point where six-man endgames will occupy one corner of a petabyte storage medium, but if I live to see this, it is hard to imagine that I will get the same thrill then as I did when first presenting the 'Oracle' with some tricky ♖+♙ vs ♖ positions.

What has changed in this new edition? First of all, there are 32 pages of new material. The vast bulk of this consists of a section of 39 exercises at the end of the book. All these positions are taken from games played after the writing of the first edition. I have chosen them to some extent to offset the heavily theoretical approach of the remainder of the book. These practical examples emphasize techniques that are frequently needed in practice, and tricky points that often cause difficulties over the board, even for very strong players. Readers should at least attempt to solve them before looking at the solutions. If you refer back to the relevant sections in the main body of the book, then most of the exercises should not cause too much trouble, although there are a few really tough positions.

These days, it is becoming harder and harder to find truly interesting over-the-board examples of basic endgames. The reason, of course, is the quick-play finish. It very often happens that an intriguing endgame position arises, but the two players are too short of time to do anything other than muddle through and hope for the best. In these cases serious errors are inevitable, and it is wrong to criticize players for making them. Learned endgame knowledge is at a premium in a quick-play finish. When you are tired after a long battle, working out a complex endgame against the clock is often impossible; if you don't already know what to do, then you are in trouble. A considerable number of misplayed positions in the exercises would have been handled more accurately had the players known a few important basic concepts, such as the Vancura draw (diagram 34). Even if readers do not wish to study every position in this book, they are again urged at least to look at those positions listed in the 'practical tips' at the end of each section.

Apart from the 32 new pages, I have taken the chance to improve the book in several other ways. The 1992 version of *Secrets of Rook Endings* was the first book I had typeset in my life; I have taken the chance to remove some rough edges from my earlier efforts. Although the first edition would not have been possible without the help of computers, the actual writing was fairly lo-tech – all the moves were typed in by hand. As a result there were a few slips, which I have now corrected. Finally, in addition to these improvements, the new edition is at a lower price than the original.

John Nunn
*Chertsey, June 1999*

# 1 ♖+a♙ v ♖

## 1.1: Pawn on the seventh rank

In many ways this is the simplest case because most positions are either clearly won or clearly drawn. Only a few situations require careful analysis. We divide this section up according to the position of White's pieces:


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1.1.2: White's rook is in front of the pawn 14
1.1.3: White's rook is behind the pawn 20
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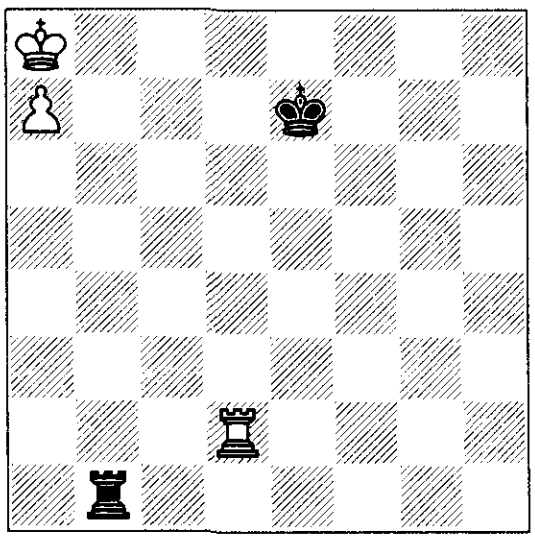
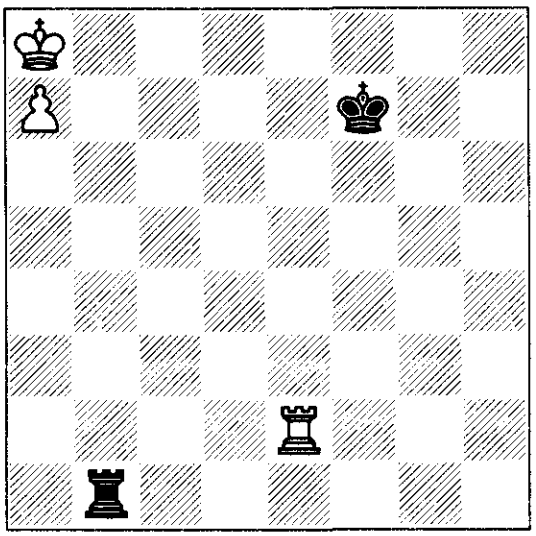
### 1.1.1: White's king is in front of the pawn

This often arises because Black has been checking White's king with his rook and the only shelter is the square in front of the pawn. Unfortunately this blocks the pawn, so in order to win White must use his rook to release the king. For example, with his pawn on a7 and king on a8, White can drive away a black rook from the b-file by playing his rook to b8. Then his king can emerge by ♔b7. Whether this wins depends on the location of Black's king. If it is close then Black draws; if it is far away then White wins. The following two positions show the narrow dividing line between drawing and winning.

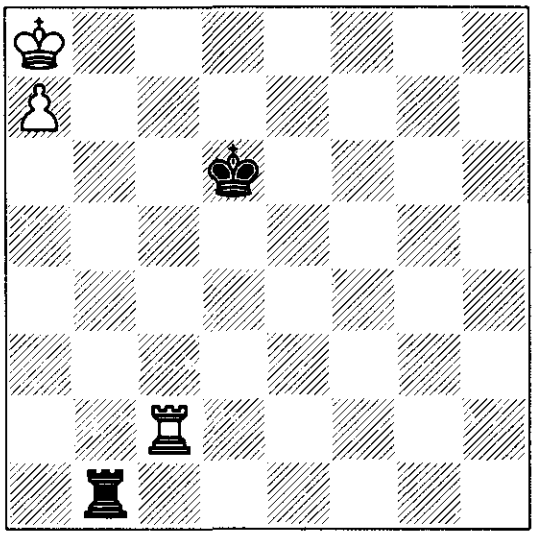


1 =/=

**(1):** Here, for example, with White to move 1 ♖h2 ♔d7 (or d6 or d8) 2 ♖h8 ♔c7! (not 2...♔c6? 3 ♖c8+! ♔d6 4 ♖b8! and White wins as in the next diagram) 3 ♖b8 ♖h1 (or any other square on the first rank) 4 ♖b7+ ♔c8 (the simplest, although 4...♔c6 also draws) 5 ♖b2 ♖c1 6 ♖h2 ♖c3 and White can never drive the king away from the squares c7 and c8. Black to move can either continue 1...♔e8 or play a tempo move on the b-file. Note that 1...♔e6? is a blunder losing to 2 ♖d8! (see diagram 2).



2 +/−



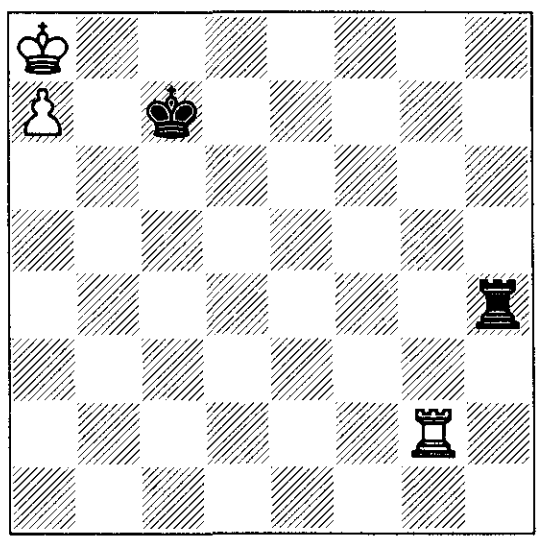
3 =/=

(2): Again it doesn't matter who is to move. White to play wins by 1 ♖c2 ♔e7 2 ♖c8! ♔d6 (2...♔d7 3 ♖b8! ♖h1 4 ♔b7! ♖b1+ 5 ♔a6! ♖a1+ 6 ♔b6! ♖b1+ 7 ♔c5! is even simpler) 3 ♖b8! ♖h1 4 ♔b7! ♖b1+ 5 ♔c8! (the path to c5 is blocked off, so White must go the other way) ♖c1+ 6 ♔d8! ♖h1 7 ♖b6+! (not 7 ♔e8? ♖h8+ 8 ♔f7 ♖h7+) ♔c5 (7...♔e5 8 ♖a6 ♖h8+ 9 ♔c7 ♖h7+ 10 ♔b6 wins) 8 ♖c6+ (the simplest, although 8 ♖b1 also wins) ♔b5 (8...♔d5 9 ♖a6 wins as in the note to Black's 7th move, while 8...♔xc6 9 a8♕+ wins the rook in a couple of moves; this also holds true if Black had played 6...♖g1) 9 ♖c8 ♖h8+ 10 ♔c7! ♖h7+ 11 ♔b8! and the pawn promotes. Black to play cannot improve his position and White wins by the same method.

The following position is slightly deceptive.

(3): It might appear that White to play can win by 1 ♖c8 ♔d7? 2 ♖b8!, as in the last diagram, but Black draws by 1...♖h1 (or any other square on the first rank except for c1 and d1) 2 ♔b7 ♖b1+ and thanks to the unfortunate position of White's rook there is no way he can escape from the checks.

The only remaining question is what happens if Black's rook isn't on the b-file. If Black's king is on c7 there isn't much White can do.

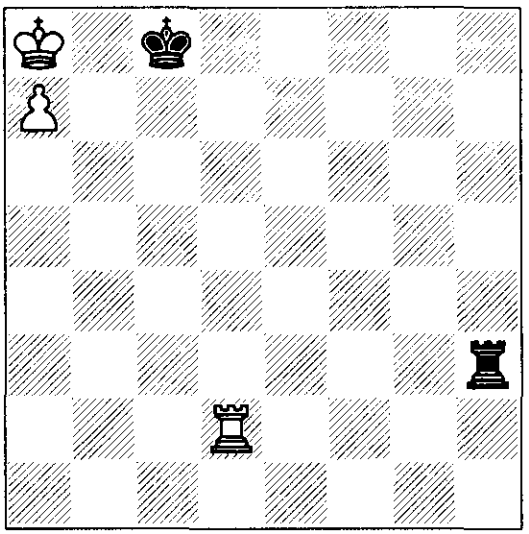


4 =/+

(4): It doesn't matter where Black's rook is on the h-file. White's only try is 1 ♖c2+ ♔b6 (it is worth noting that 1...♔d7 loses after 2 ♔b7! ♖b4+ 3 ♔a6! ♖a4+ 4 ♔b6!, but if Black's

rook were on h1 or h3 then 1...♔d7 would also draw) 2 ♖c8 (2 ♔b8 ♖h8+), but Black can simply win the pawn after 2...♖h7.

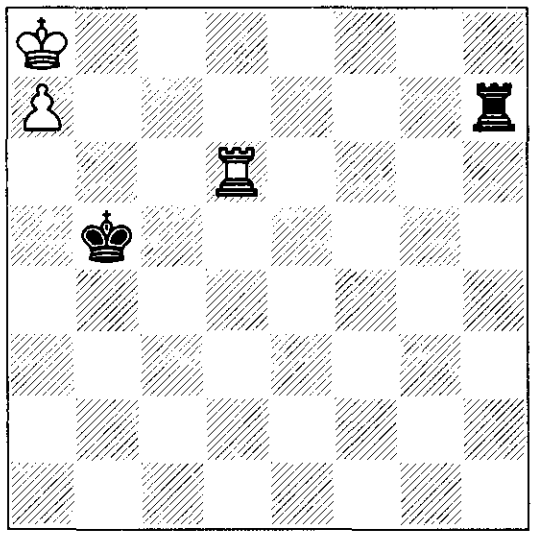
If Black's king is on c8, the result depends on the position of the rooks.



5 =/=

(**5**): With White to play, 1 ♖c2+ ♔d7! 2 ♔b7 ♖b3+! 3 ♔a6 ♖a3+! 4 ♔b6 ♖b3+! and the rook is just far enough away to prevent White's king escaping from perpetual check. With Black's rook on h1 or h7 the result is also a draw (in the latter case because 1 ♖c2+ can be met by 1...♖c7 – *ECE* overlooks this point!), but on h4, h5, h6 and h8 Black loses. Finally if we move White's rook to g4, g5 or g6 then the only square on the h-file which allows Black to draw is h7. This is because White's rook can act as a shield, for example with W♖g4 v B♖h1 White can win by 1 ♖c4+ ♔d7 2 ♔b7 ♖b1+ 3 ♔a6 ♖a1+ 4 ♔b6 ♖b1+ 5 ♔a5 and the rook will interpose on a4. With Black to play the result is always a draw.

There are some interesting positions with Black's king further away from the pawn.

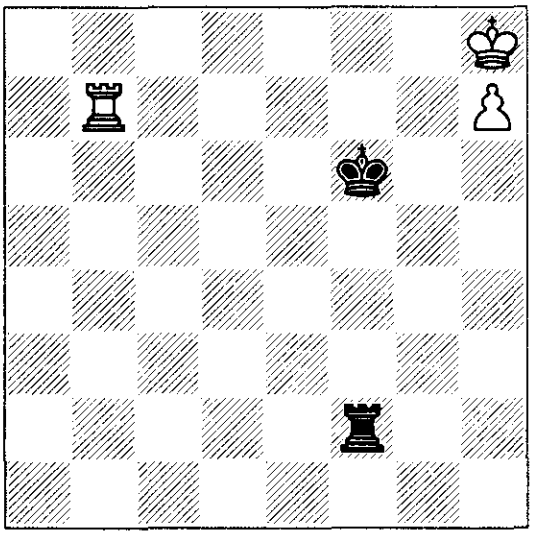


6 +/=

*Original*

(**6**): White to play wins by 1 ♔b8! ♖h8+ 2 ♔c7! ♖h7+ 3 ♖d7! followed by ♔b7 winning the rook. However, the white rook is well placed on d6, cutting off Black's king and standing ready to interpose on d7 or d8. Therefore Black to move can draw by playing 1...♔c5!, forcing the rook to move. After 2 ♖d1 ♔b6 3 ♖b1+ ♔a6 Black draws easily, so White should play 2 ♖e6. Now there is a new threat to win by 3 ♔b8 followed by fleeing with the king to a5 when Black starts checking. Black must reply 2...♔b5!, cutting off the escape route. Then White's rook is too far away to interpose after 3 ♔b8 ♖h8+ 4 ♔c7 ♖h7+, so he has nothing better than to return with 3 ♖d6.

(**7**): In this special case White wins because of the bad position of Black's rook: 1 ♔g8! ♖g2+ 2 ♔f8! ♖h2 3 ♖f7+ ♔e6 (3...♔g6 4 ♖g7+ ♔f6 5

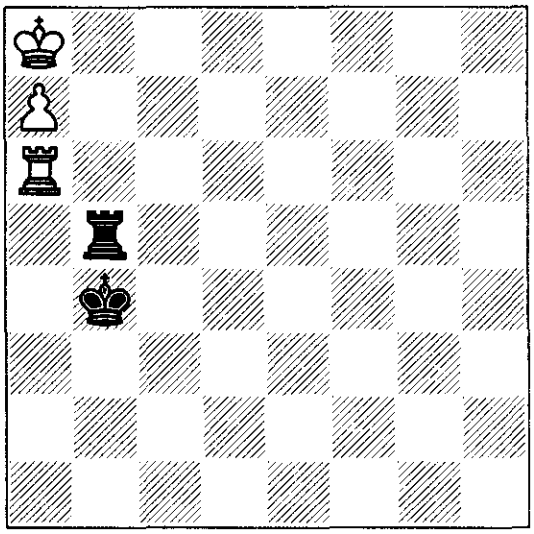


7 +/=

*Ponziani, 1787*

♔g8) 4 ♔g8 followed by ♖g7 and h8♕.

The following position is a curiosity.



8 =/–

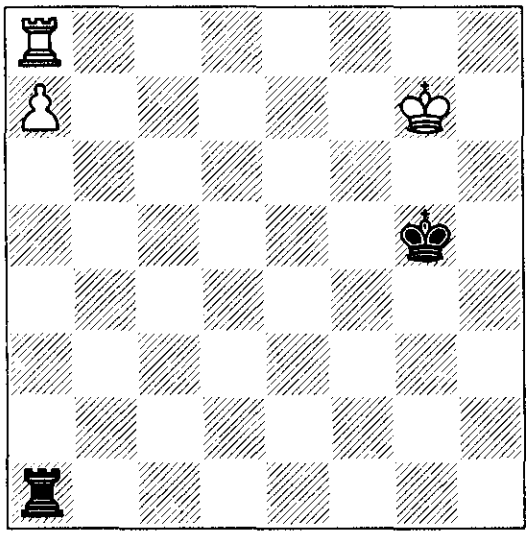
**(8):** This is a position of reciprocal zugzwang. With Black to move the analysis runs 1...♔c5 (other king moves are also met by ♖h6, while after 1...♖h5 White wins easily by 2 ♖a1 followed by ♔b8 or ♔b7) 2 ♖h6 (threats 3 ♖h5+ and 3 ♖h8 ♔c6 4 ♖c8+ ♔d7 5 ♖b8) ♔b4 (or 2...♖b1 3 ♖h8 ♔c6 4 ♖c8+! followed by ♖b8, winning as in diagram 2) 3 ♖h1 (but not 3 ♖h8? ♔a5! 4 ♖b8 ♖h5 drawing) ♖g5 (after 3...♔a3 or 3...♔c3 then 4 ♖h8 does win, while 3...♔a5 fails to 4 ♖a1+ ♔b6 5 ♔b8) 4 ♖h7 followed by ♔b8 or ♔b7 and wins. On the other hand with White to move 1 ♖a1 (1 ♖h6 ♔a5! 2 ♖h1 ♔b6! 3 ♖c1 ♖h5 is an easy draw) ♔c5! 2 ♖c1+ (2 ♖h1 ♔c6) ♔b6! (2...♔d6? 3 ♖c8! wins) 3 ♖c8 (3 ♔b8 ♔a6+! 4 ♔c7 ♖b7+! draws) ♖a5 offers no winning prospects.

### 1.1.2: White's rook is in front of the pawn

This is the most interesting of the five cases. If we consider a position with White's rook on a8, his pawn on a7 and Black's rook on a1 then without the kings White cannot promote his pawn. But if we add Black's king the situation changes. White can promote his pawn and win Black's rook except if Black's king is on a6, b6, c6, b7, c7, g7 or h7. In most cases White achieves his aim by checking and promoting, but if Black's king is on d7, e7 or f7 he uses a tactical trick to win Black's rook: 1 ♖h8 ♖xa7 2 ♖h7+. Black to play draws if he can move his king to one of the drawing squares listed above. We should mention one other possibility for Black to hide his king. If the black rook is on a3, say, instead of a1, then his king can hide on a1 or a2. In many cases adding the white king changes little. The reason is that

White's king cannot effectively support the pawn. Black keeps his rook on a1 or a2 and when the white king reaches b6, threatening to move the rook from a8, Black checks on the b-file and the king has to move away from the pawn, whereupon Black returns to the a-file.

However there are some situations when adding White's king makes a difference, because Black's king can shelter behind White's.

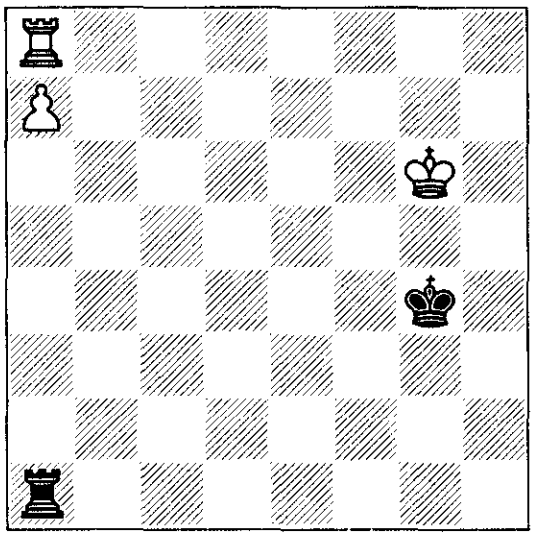


9 =/=

*Berger, 1890*
*Theorie und Praxis der Endspiele*

**(9):** We may as well take White to move. Black's defensive plan is simply to keep his king on the same file as White's king, for example 1 ♔f7 ♔f5! (1...♔f4 2 ♔e6 wins for White as in the next diagram) 2 ♔e7 ♔e5! 3 ♔d7 ♔d5! 4 ♔c7 ♔c5! (4...♖c1+ 5 ♔b6 ♖b1+! 6 ♔a5 ♖a1+! 7 ♔b4 ♔c6 also draws) 5 ♔b7 (5 ♖c8 ♖xa7+ 6 ♔b8+ ♔b6) ♖b1+! 6 ♔c8 ♖a1! 7 ♔c7 ♖a2 (or a3/a4/a6, but not 7...♖a5? 8 ♔b7! ♖b5+ 9 ♔a6! ♖b6+ 10 ♔a5! ♖b5+ 11 ♔a4! ♖b4+ 12 ♔a3! and White is winning) and White cannot make progress.

If the position of the kings is shifted down one square then White to move wins.

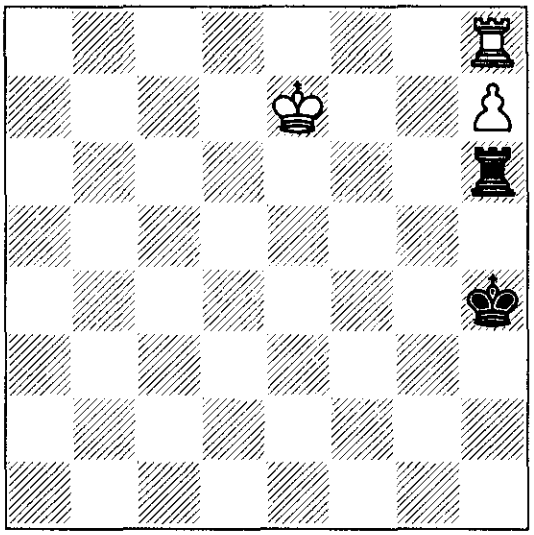


10 +/=

**(10):** 1 ♔f6! ♔f4 2 ♔e6! ♔e4 3 ♔d6! ♔d4 4 ♔c6! ♖c1+ (after 4...♔c4 one difference becomes clear: 5 ♖c8! ♖xa7 6 ♔b6+) 5 ♔b5 ♖b1+ 6 ♔a4 ♖a1+ 7 ♔b3 and now the second difference is revealed – Black's king is too far from the pawn. Black to move draws by 1...♖a6+! 2 ♔f7 ♔f5 3 ♔e7 ♔e5 4 ♔d7 ♔d5 5 ♔c7 ♔c5! 6 ♔b7 ♖b6+! 7 ♔c7 ♖a6 and White can only repeat moves. In general, such positions with opposed kings are won for White except when (as in diagram 9) Black is able to confine White's king to the seventh and eighth ranks.

We mentioned above that Black's king may also hide on the a-file behind the rook. Normally this hiding place is good enough for a draw, but if the white king is already close to the pawn

Black can lose if he has insufficient checking distance for his rook.



11 +/=

*Vancura, 1922*
*Cesko Slovo*

**(11):** The first move is a surprise.

**1 ♔f8!**

An excellent move. After 1 ♔f7? ♔h5! we have a position of reciprocal zugzwang. Black to play loses because ...♔h4 is forced, allowing ♔g7, but White to play only draws because 2 ♔g7 (other king moves allow ...♔g6) ♖g6+! 3 ♔f8 ♔h6 wins the pawn.

1 ♔e8? is also bad due to 1...♔h3! (1...♖h5 2 ♔f7 wins for White as in the main line) 2 ♔f7 ♖h4! 3 ♔g6 ♖g4+! (Black has given his rook more checking distance) 4 ♔f6 ♖h4 (4...♖f4+ also draws) 5 ♔f5 ♖h6! with a draw.

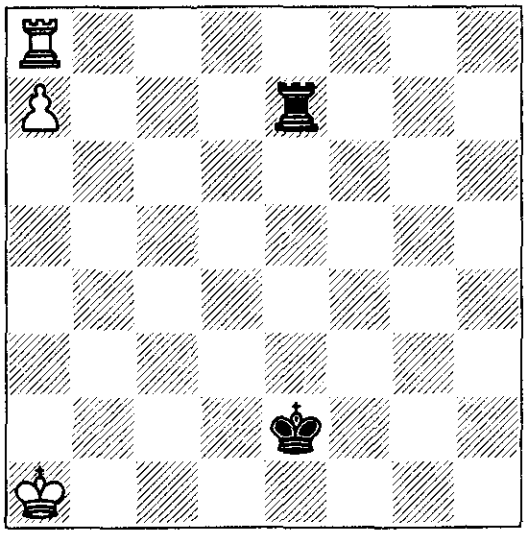
**1 ... ♖h5**

1...♔h5 2 ♔f7 is the reciprocal zugzwang with Black to move.

**2 ♔f7** (2 ♔g7 is also winning) **♖f5+** (2...♔h3 3 ♔g6 and 2...♖h6 3 ♔g7 lose more quickly) **3 ♔e6 ♖h5 4 ♔f6!** and now Black is in zugzwang and must lose after 4...♖h6+ 5 ♔g7 or 4...♔h3 5 ♔g6. It is interesting to note that the position after 4 ♔f6! is not a reciprocal zugzwang because if it were White to move he could win by passing the move to Black with 1 ♔f7 ♖f5+ 2 ♔e6 ♖h5 3 ♔f6.

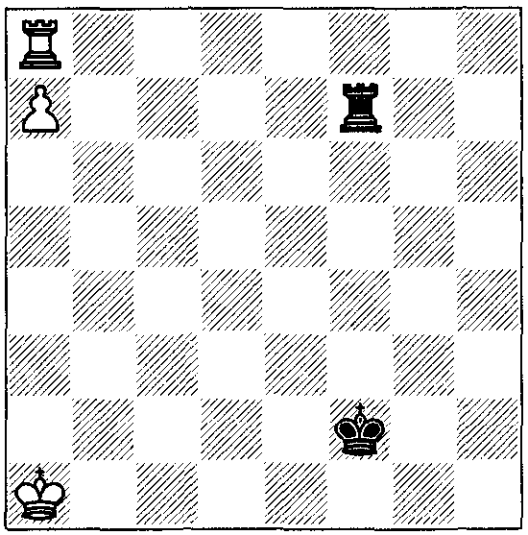
We now consider the situation in which White has rook on a8 and pawn on a7, but Black's rook is on the second rank, for example e7. If we ignore White's king, the drawing zone for Black's king consists of the squares a1, a2, a3, a4, a5, a6, b6, b7, e1, e2, e3, e4, e5 and e6. On the a-file Black threatens to approach the white pawn, but the squares on the e-file are completely isolated from the rest of the zone. This means that with his king on e2 all Black can do is march his king up and down the e-file. Everything else allows White to promote his pawn. If we add the white king somewhere on the queenside White can win.

**(12):** 1 ♔b2 ♔e3 (after 1...♖b7+ 2 ♔c3 ♖e7 3 ♔d4 White's king reaches d6, displacing Black's rook and winning) 2 ♔b3 ♔e4 3 ♔b4 ♔e5 4 ♔c5 and Black loses after 4...♔e4 5 ♔d6 or 4...♔e6 5 ♔b6. Black's problem is that he has to bring his king towards his rook or ♔d6 wins, but when the king is on e6 White can win by ♔b6 instead. Alert readers will have deduced that Black's position is improved if his king and rook are on the f-file, because White's king cannot



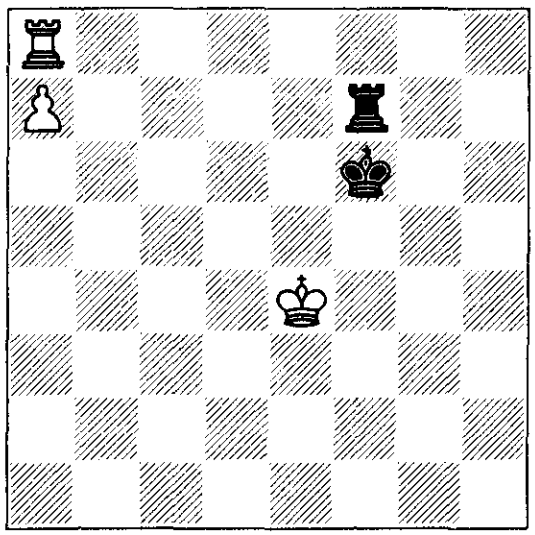
12 +/–

threaten to go to b6 and e6 at the same time. In fact this difference allows Black to draw.



13 =/=

**(13):** 1 ♔b2 ♔f3! (1...♔f1? 2 ♔c3 and 1...♖b7+? 2 ♔c3 allow White's king to reach e6) 2 ♔c3 ♔f4! 3 ♔c4 ♔f5! (still not 3...♖c7+? 4 ♔d5) and now 4 ♔c5 ♔f4! 5 ♔c6 ♔f5! 6 ♔d6 (6 ♔b6 ♖f6+) ♔f6! 7 ♔d5 ♔f5! (not 7...♖d7+? 8 ♔c6 ♖f7 9 ♔b6) leads to a draw. The distance between b6 and e6 is great enough to give Black time to meet ♔b6 by ...♖f6+ and ♔d5/6 by ...♔f5/6. With Black's pieces on the f-file White cannot win even if he reaches what might appear to be a zugzwang position.

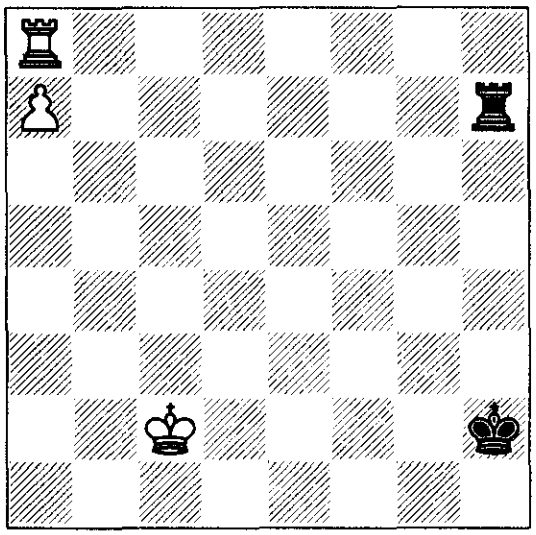


14 =/=

**(14):** With White to move 1 ♔f4 (1 ♔d5 ♔f5 is the last position) ♔g6+ followed by ...♖g7 enables Black to set up an analogous defensive position even further away, while with Black to move 1...♖e7+! 2 ♔d5 ♖f7! is the previous position.

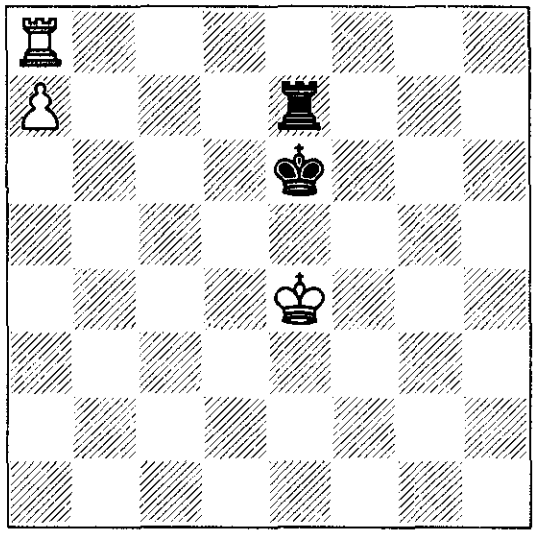
The g-file is much the same as the f-file, but strangely enough Black's position again becomes difficult if his pieces are on the h-file. Let us assume Black's rook is on h7 and his king on h2. Then White to play wins with his king on all squares except for a1, b1, c1, d1, e1, f1, a2, b2, a3, b3, a4, b4, b8, c8, d8 and e8. To see why this is let's put the king on c2.

**(15):** 1 ♔d3! ♔h3 (forced or else the king reaches g6) 2 ♔e4! ♔h4 3 ♔f5! ♔h5 4 ♖f8! ♖xa7 5 ♖h8 mate. Black to move draws by 1...♔h3! 2



15 +/=

*Clausen, 1925*
*Arbetet (end of study)*



16 +/=

*Chéron, 1923*

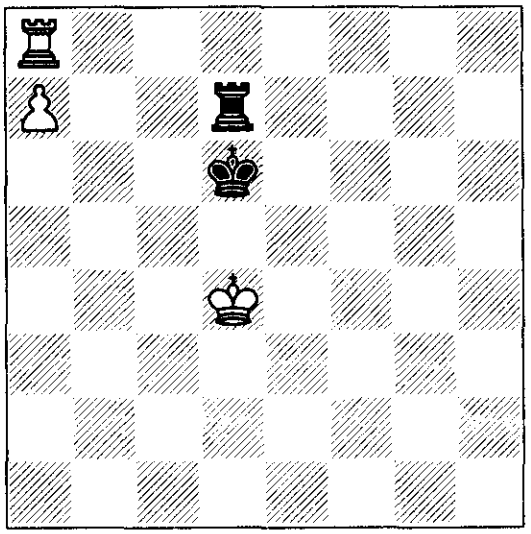
♔d3 ♔h4! 3 ♔e4 ♔h5! 4 ♔e5 ♖e7+ 5 ♔f5 ♖f7+! 6 ♔e6 ♖h7! 7 ♔f6 ♔h6! and Black can always avoid the mating trick. Thus the question of whether the position is a win or a draw becomes a matter of timing. If Black's king can reach h6 the position is drawn, but h5 is not good enough when White's king is already on f5. For example, if we put White's king on b5, (Romanovsky, *Shakhmaty v SSSR* 1938) he wins by 1 ♔b6! (gaining time by forcing Black to check) ♖h6+ 2 ♔c5 ♖h7 3 ♔d6 ♔h3 4 ♔e6 ♔h4 5 ♔f5! as above.

We look in more detail at the borderline cases arising when Black's pieces are on the e-file. Since the general position with White's king on the queenside is a win, the question is normally whether his king can reach that part of the board. The following position is critical.

**(16):** With White to play 1 ♔d4 ♖d7+ 2 ♔c5 is the win we saw above, but with Black to play 1...♔f6+! 2 ♔d5 ♖f7! sets up the position on the f-file and draws. It follows that if White's king is to the right of the e-file then the position is a draw. The reason is that White must cross the e-file in order to win and when he plays his king onto the e-file Black will move his position to the right with the aid of a tempo-gaining discovered check. If White's king is already on the e-file then the position is a win with White to move and a draw with Black to move.

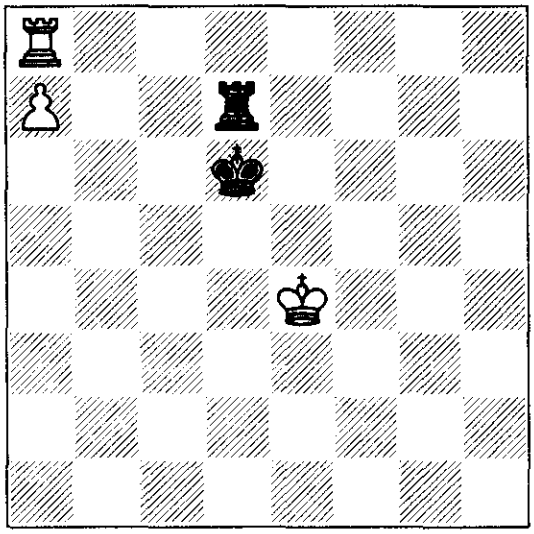
With Black's pieces on the d-file the position with White's king on the queenside is again a win for White. He simply plays his king to b6; Black must respond ...♖d6+ and then ♔c7 wins. However the other positions are different.

**(17):** With White to move 1 ♔c4 ♖c7+ 2 ♔b5 is the same as before, but Black to play draws not by moving his king to the right (we know that the e-file position is lost), but by moving it to the left: 1...♔c6+ 2 ♔c4 ♔b7 and wins the pawn.



17 +/=

*Moravec, 1931*
*Ceskoslovensky Sach*



18 =/–

*Moravec, 1931*
*Ceskoslovensky Sach*

Another difference occurs when the white king is to the right of the d-file. In the case where Black's pieces were on the e-file this always led to a draw because Black had the chance to shift his pieces to the f-file. Here, however, shifting Black's pieces to the right by one file does not lead to a drawn position. The result is that some positions are wins for White.

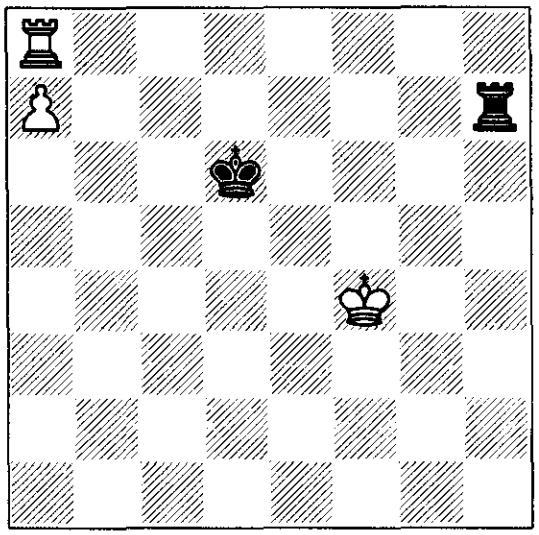
**(18):** This is the key position. It is reciprocal zugzwang. With White to move, 1 ♔d4 ♔c6+ is the last diagram, while 1 ♔f4 (1 ♔e3 ♔d5! 2 ♔d3 is the same) ♔d5! 2 ♔e3 ♖e7+! (not 2...♔d6? 3 ♔e4! winning) 3 ♔d3 ♖d7! 4 ♔c3 ♖c7+! followed by ...♔c6-b7 draws. With Black to play, 1...♖e7+ 2 ♔d4 (2 ♔f5? ♖f7+! 3 ♔g6 ♖d7! 4 ♔f6 ♔d5! 5 ♔f5 ♖f7+! draws, as does 2 ♔f4? ♔e6! with a position we saw above) leads to previously analysed positions after 2...♖d7 3 ♔c4 or 2...♔e6 3 ♔c5.

The fact that Black is nearer to the pawn makes a big difference, for example if we move White's king to d3 in the above diagram then White to play can still win with 1 ♔c4, but with the king on d2 the position is drawn with either side to move. The proof is the line 1 ♔c3 (we saw 1 ♔e3 ♔d5! above) ♖c7+! 2 ♔b4 ♔c6! followed by ...♔b7. It follows that White to play can win against B♔d6 and B♖d7 provided his king is on the a-, b- or c-files, or within one square of e4.

Now we can easily solve Grigoriev's study.

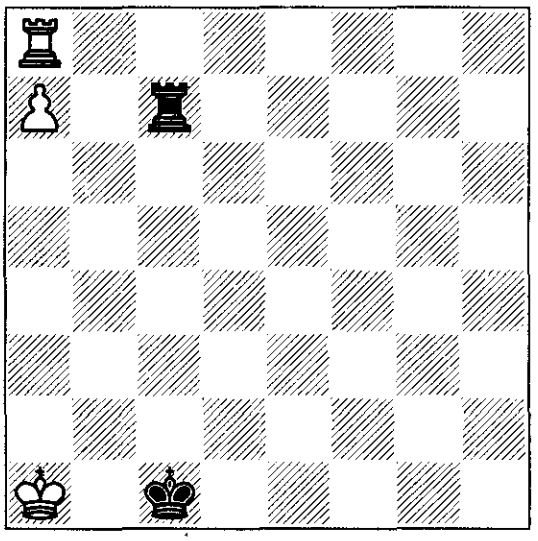
**(19):** After 1...♖f7+ White must avoid 2 ♔e4? ♖d7! when White is in zugzwang. The right line is 2 ♔e3! ♖d7 (2...♖e7+ 3 ♔d4 ♖d7 4 ♔c4!) 3 ♔e4! putting Black in zugzwang.

Finally we consider the case in which Black's pieces are on the c-file. Since Black threatens to bring his king to c7, most positions are simply a matter of timing, but there is one exceptional situation of reciprocal zugzwang.



19 /–

*Grigoriev, 1934 (end of study)*



20 =/–

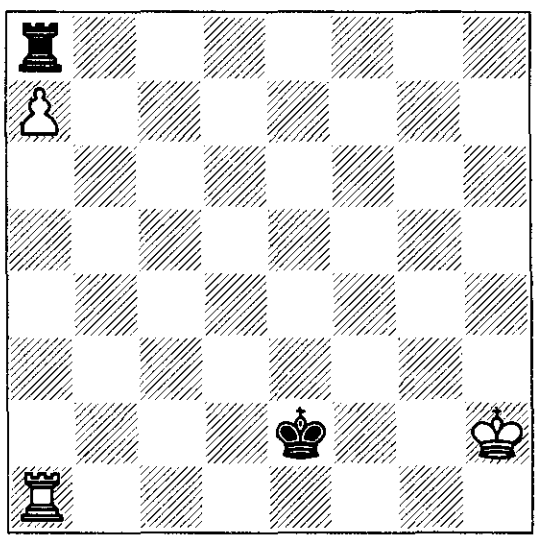
*Chéron, 1923*

**(20):** The result is determined by the opposition. With White to play 1 ♔a2 ♔c2! 2 ♔a3 ♔c3! 3 ♔a4 ♔c4! 4 ♔a5 ♔c5! 5 ♔a6 ♖c6+! 6 ♔b7 ♖b6+! 7 ♔c7 ♖a6 leads to a draw.

With Black to play White wins after 1...♔c2 (1...♖c6 2 ♔a2! ♖a6+ 3 ♔b3! ♔b1 4 ♖h8 wins) 2 ♔a2! ♔c3 (2...♖c6 3 ♔a3! ♖a6+ 4 ♔b4 ♔b2 5 ♔b5 ♖a3 6 ♔b6! ♖b3+ 7 ♔c5 ♖c3+ 8 ♔d4 wins) 3 ♔a3! ♔c4 4 ♔a4! ♔c5 5 ♔a5! ♔c6 6 ♔a6! followed by moving the rook. It follows that the positions with ♔a2 v ♔c2, ♔a3 v ♔c3, ♔a4 v ♔c4 and ♔a5 v ♔c5 are also reciprocal zugzwang.

### 1.1.3: White's rook is behind the pawn

In this case we may imagine that White's rook is on a1, his pawn is on a7 and Black's rook is on a8. In most cases the result may be found by counting. If White's king can reach a6 or b7 then he wins; if Black's king can reach b6 or b7 then he draws (there is an exception to this when White's king is on d6 or d7 – see below). Sometimes White can use his rook on the a-file to cut off Black's king.



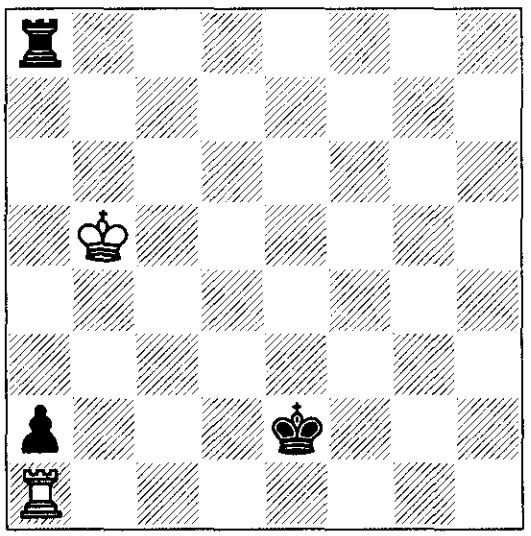
21 +/=

*Kopaev, 1958*

**(21):** White to play continues 1 ♖a3! (if White waits a move to use his rook it is too late: 1 ♔g3? ♔d3! 2 ♖a4 ♔c3 3 ♔f4 ♔b3! 4 ♖a1 ♔c4 5 ♔e5

♔c5! 6 ♔e6 when Black may draw by 6...♔c6 or 6...♔b6 7 ♔d6 ♖xa7 8 ♖b1+ ♔a5!) ♔d2 2 ♔g3! ♔c2 3 ♔f4! ♔b2 4 ♖a6! (not 4 ♖a5? ♔b3 5 ♔e5 ♔b4! 6 ♖a1 ♔c5! as in the last bracket) ♔b3 5 ♔e5! ♔c4 6 ♔d6! ♔b5 7 ♖a1 ♔b6 8 ♖b1+! (this is one of the exceptional positions mentioned above) ♔a6 (8...♔xa7 9 ♔c7! and 8...♔a5 9 ♔c6! are simple) 9 ♔c7! (9 ♔c6? ♖c8+! 10 ♔d7 ♖h8 draws) ♖xa7+ 10 ♔c6! and wins. With Black to play the extra tempo makes all the difference: 1...♔d3 2 ♖a4 ♔c3 3 ♔g3 ♔b3 4 ♖a1 ♔b4 5 ♔f4 ♔c5 6 ♔e5 ♔b6 7 ♔d6 ♖xa7 8 ♖b1+ ♔a5! draws.

Using this analysis we can solve the next study.



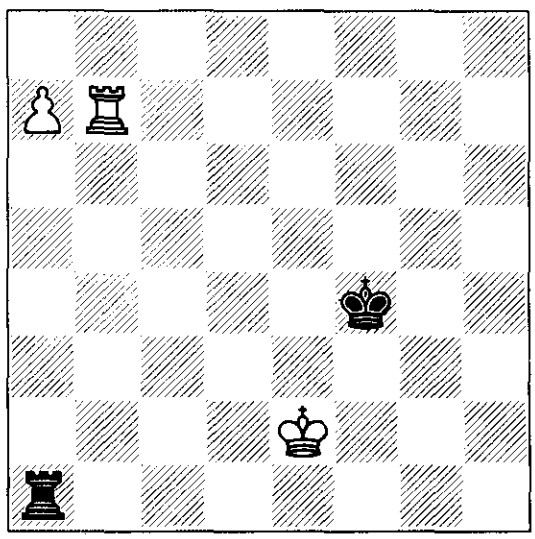
22 =/+

*Seyboth, 1899*

**(22):** White to play draws by 1 ♔c4! (not 1 ♔b4? ♔d3! 2 ♔b3 ♖b8+! as above) ♔d2 2 ♔b3! ♖b8+ 3 ♔c4! (3 ♔a3? ♔c2! as above) ♖b2 4 ♖h1 (not 4 ♔d4? ♖b4+ 5 ♔c5 ♖a4! 6 ♔b5 ♖a8 followed by ...♔c2 and wins) ♔c2 5 ♖a1 (or 5 ♖h2+, but not 5 ♖g1? ♖b8 6 ♖g2+ ♔b1! 7 ♖g1+ ♔b2! 8 ♖g2+ ♔a3! 9 ♖g3+ ♔a4! 10 ♖g7 ♖b5 11 ♖g1 ♖b1 12 ♖g8 ♖c1+ and wins) and Black has nothing better than to repeat moves by 5...♔d2. It is worth noting that the position after 5 ♖a1 is one of reciprocal zugzwang. If White were to move then he would have to play, for example, ♖h1 when ...♖b8 wins as in the note to White's 5th move.

### 1.1.4: White's rook defends the pawn from the side

In this case White can often use his rook to cut off Black's king.



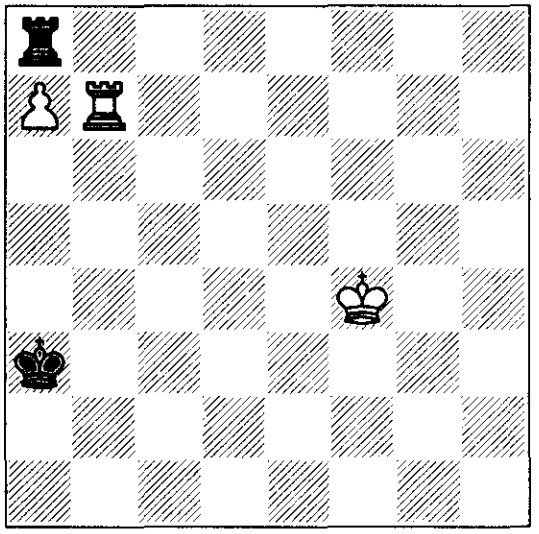
23 +/=

*Averbakh, 1972*

**(23):** With White to play 1 ♖e7! (1 ♔d3? ♔e5! 2 ♔c4 ♔d6! 3 ♔b5 ♖b1+! 4 ♔a4 ♖a1+! 5 ♔b3 ♔c6 draws) ♔f5 (1...♖a3 2 ♔d2 ♔f5 3 ♔c2 ♔f6 4 ♔b2 ♖a6 5 ♖h7! ♔e5 6 ♔b3 ♔d5 7 ♖h5+ ♔d4 8 ♖h4+ and 9 ♖a4 wins) 2 ♔d3! ♔f6 3 ♖h7! (otherwise the black king's march to the queenside will gain a

tempo by attacking the rook) ♔e5 4 ♔c4! ♔d6 5 ♔b5! (threatening ♖h6+ followed by ♖a6) ♖b1+ 6 ♔a6! ♖a1+ 7 ♔b7! ♖b1+ 8 ♔c8! ♖c1+ 9 ♔b8 ♖b1+ 10 ♖b7 wins. With Black to play the extra tempo allows him to reach b6 with his king: 1...♔e5 2 ♔d3 ♔d6 3 ♔c4 ♔c6 and ...♔b6.

The situation is more complex when Black's rook is on a8. We start with a relatively simple example.



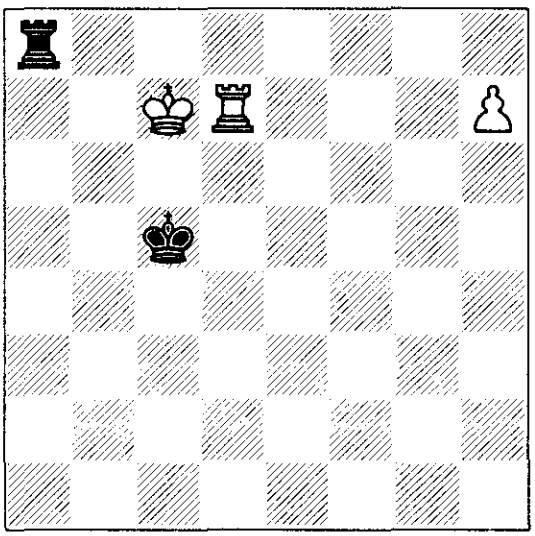
24 +/=

*Ahrend, 1907*
*Deutsches Wochenschach*

**(24):** 1 ♔e5! ♔a4 2 ♔d6! ♔a5 3 ♔c7! (not 3 ♔c6? ♔a6! 4 ♖b1 ♖c8+! 5 ♔d7 ♖h8) ♖h8 (3...♔a6 4 ♖b1) 4 ♖b1 ♖h7+ 5 ♔c6! ♖h6+ 6 ♔d5 and wins by approaching Black's rook. Black to play draws by ...♔a4-a5-a6.

The next position is another reciprocal zugzwang.

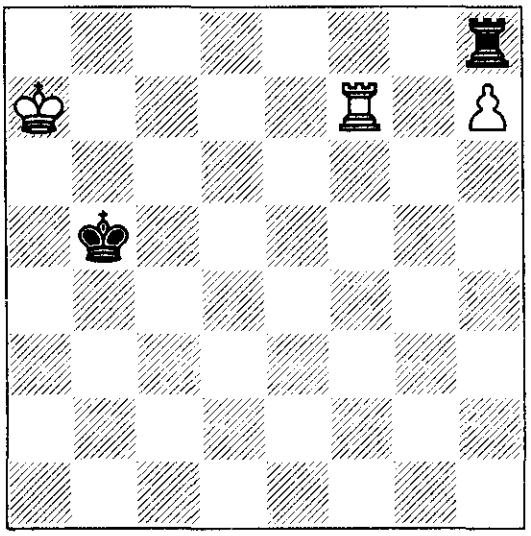
**(25):** Firstly let's suppose that Black is to move. The play is based largely on the position of reciprocal zugzwang mentioned in the notes to diagram 22 (i.e. W♔f7, ♖g7, ♙h7 v B♔f5, ♖h8), but there is a bit more to it than that. White would like to play ♖g7 followed by ♔d7-e7-f7, which wins if Black's rook is on e8 or f8 because White gains a tempo by attacking it with his king. Moreover it also wins if Black's rook is on h8 because Black falls into the diagram 22 zugzwang (after 1...♖h8 2 ♖g7! ♔d5 3 ♔d7! ♔e5 4 ♔e7! ♔f5 5 ♔f7!, for example). It follows that Black's rook occupies the only drawing square on the 8th rank and so Black to play loses. White to play can only draw, for example 1 ♖g7 (1 ♖e7 ♔d5! 2 ♔d7 ♖b8! is typical; Black avoids ...♖h8, which would lead to zugzwang, but also keeps his rook to the left of White's king to prevent White gaining a tempo by attacking it) ♔d5! 2 ♔d7 ♔e5! 3 ♔e7 ♔f5! 4 ♔f7 ♖h8 (or 4...♖a7+) and draws.



25 =/–

*Original*

This position is closely related to the following study, but strangely enough the fact that diagram 25 is a win with Black to move appears to be irrelevant.



26 +/

*Vancura, 1925*
*28 Rijen*

(**26**): White must prevent the threatened ...♔c6.

**1 ♖c7!**

Already a deep move. White would like his rook to be on g7, for example if we move the rook from f7 to g7 in the initial position White wins easily by 1 ♔b7! ♔c5 (1...♖ moves 2 ♖g5+ and 3 ♖h5 wins) 2 ♔c7! ♔d5 3 ♔d7! ♔e5 4 ♔e7! ♔f5 5 ♔f7! reaching the zugzwang mentioned in the previous diagram. From this White's winning plan is clear; he plays ♖c7, cutting off Black's king, then 2 ♔b7 and finally 3 ♖g7. It is interesting to note that White must not delay with this plan. If he plays 1 ♔b7? Black draws by 1...♔c5! 2 ♖d7 (2 ♔c7 ♔d5! 3 ♔d7 ♔e5! 4 ♔e7 ♖a8 is a simple draw) ♖f8 (or 2...♖e8) 3 ♔c7 ♖a8! and we have reached diagram 25 with White to move.

**1 ... ♖d8**

Black has no choice but to move his rook because White wins easily after 1...♔a5 2 ♖c5+ and 3 ♖h5.

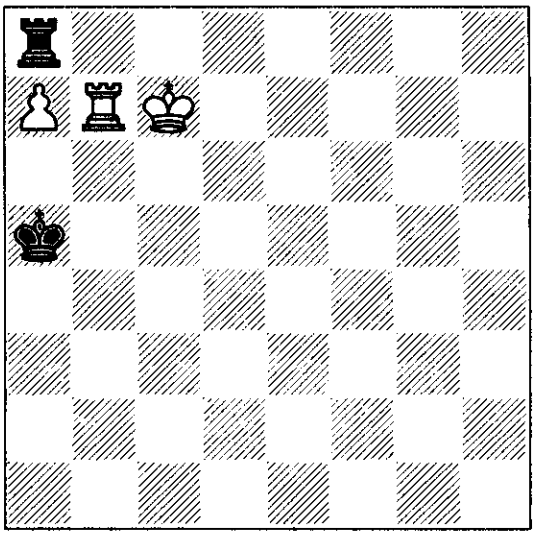
**2 ♔b7! ♖h8**

Black faces a choice of evils. If the rook goes to h8 Black will end up in zugzwang, while on any other square White gains a tempo by attacking it with his king, for example 2...♖f8 3 ♖g7! ♔c5 4 ♔c7! ♔d5 5 ♔d7! ♔e5 6 ♔e7! ♖h8 (or 6...♖a8 7 ♖g5+) 7 ♖g5+! (but not 7 ♔f7? ♔f5! draw) ♔f4 8 ♖h5! ♔g4 9 ♖h1 and wins. This is the difference between 1 ♖c7! and 1 ♔b7 ♔c5! 2 ♖d7; in the latter case Black could avoid both problems by transferring his rook to a8.

**3 ♖g7!** (not 3 ♖d7? ♔c5! 4 ♔c7 ♖a8! drawing as before) **♔c5 4 ♔c7! ♔d5 5 ♔d7! ♔e5 6 ♔e7! ♔f5 7 ♔f7! ♖a8 8 ♖g1 ♖a7+ 9 ♔g8! ♖a8+ 10 ♔g7! ♖a7+ 11 ♔h6! ♖a6+ 12 ♔h5 ♖a2 13 ♖g4** (13 ♖g5+ ♔f4 14 ♖g4+ is also effective) **♖a8 14 ♖g8 ♖a1 15 ♖f8+** and wins.

Finally we consider a further position of reciprocal zugzwang.

(**27**): If Black's king were on c5 then we would have the reciprocal zugzwang noted in the analysis of diagram 22. It is curious that the same situation exists with the king on a5. Black to move loses following 1...♖h8 (1...♔a6 2 ♖b1 or 1...♔a4 2 ♔b6) 2 ♖b1 ♖h7+ 3 ♔c6! ♖h6+ 4 ♔d5 approaching the rook. White to play has nothing better than 1 ♔c6, but then 1...♔a6! 2 ♖b1 ♖c8+! 3 ♔d7 ♖h8 draws.

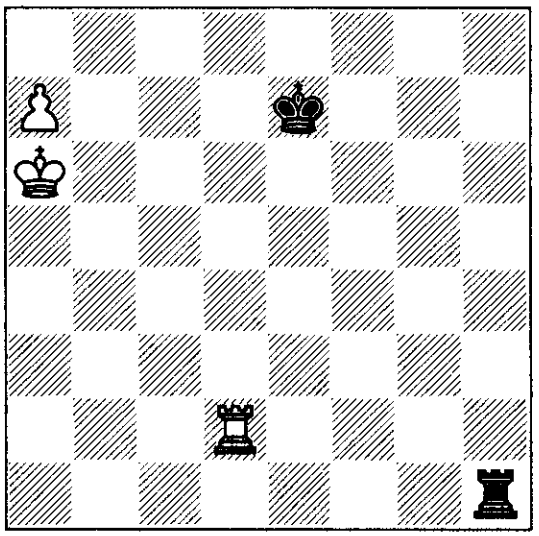


27 =/–

*Original*

## 1.1.5: Other situations

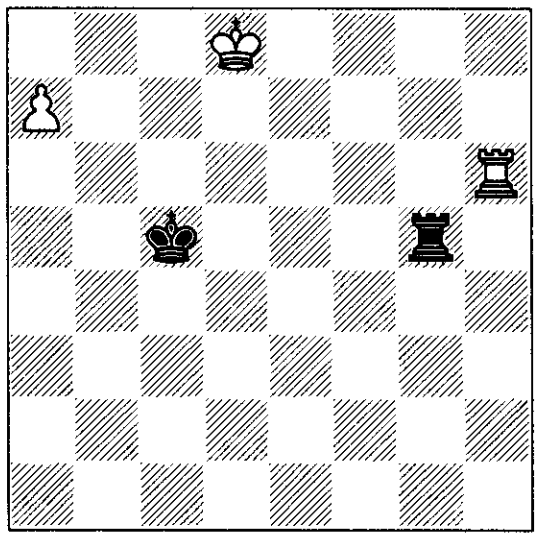
We finish the case of the pawn on the seventh with a couple of positions which are related to those we have already analysed.



28 /–

*Chéron, 1967*

**(28):** At first sight this is drawn because it seems that White can only hide from the checks on a8 and we already know that the position arising from 1...♖a1+ 2 ♔b7 ♖b1+ 3 ♔a8 is a draw. However White can win as follows: 1...♖a1+ 2 ♔b7 ♖b1+ 3 ♔c6! ♖c1+ (after 3...♖a1 4 ♖d7+ ♔e6 5 ♖b7 White's king reaches b8) 4 ♔d5! ♖a1 (4...♖c8 5 ♖a2 ♖a8 6 ♔c6 wins) 5 ♖h2! (threat 6 ♖h8) ♔f6 (5...♖d1+ 6 ♔c5 ♖c1+ 7 ♔b4 ♖c8 8 ♖a2 ♖a8 9 ♔b5 wins) 6 ♖h7! followed by the advance of White's king to b8. It might appear to be a coincidence that the position of Black's king on e7 allows the trick with 5 ♖h2!, but it is not really pure chance because Black also loses if his king starts on e6 or e8. With the king on e6 White wins by 1...♖a1+ 2 ♔b7 ♖b1+ 3 ♔c8 ♖c1+ 4 ♔d8 ♖a1 5 ♖d7 followed by ♖b7, ♔c8 and ♔b8. With the king on e8 the win is 1...♖a1+ 2 ♔b6 ♖b1+ 3 ♔c5 ♖c1+ 4 ♔d4 ♖a1 5 ♖h2.



29 /=

*Seyboth, 1899*

**(29):** White threatens to win by 1 ♖e6 or 1 ♖h8, amongst other methods. The only move is 1...♖g7! (1...♖g8+? 2 ♔c7! ♖g7+ 3 ♔b8! ♖g8+ 4 ♔b7!

♖g7+ 5 ♔a6! ♖g8 6 ♖b6 followed by ♖b8 wins) 2 ♖a6 (2 ♖c6+ ♔b5! 3 ♖c7 ♖g8+! 4 ♔d7 ♔b6 draws) ♖g8+! 3 ♔e7 (after 3 ♔d7 ♖g7+! White has to return to the first rank) ♖a8! 4 ♔d7 ♔b5! 5 ♖a1 ♔b6! 6 ♖b1+ ♔c5! with the same draw as in diagram 22.

There are 12 positions of reciprocal zugzwang in the ending of ♖+♙a7 v ♖. We have already seen 11 of the 12: diagrams 8, 11 (after 1 ♔f7 ♔h5!), 18, 20 (and the 4 related positions mentioned in the notes), 22 (after 5 ♖a1), 25 and 27. The remaining position? W♔a8, ♖b8, ♙a7 v B♔c7, ♖c8.

**Practical tips:** Most positions with the pawn on the seventh are clear-cut and the few difficult situations arise very rarely in practice. It is worth looking at diagrams 21 and 22 because positions with the rook behind the pawn seem to occur relatively often.

## 1.2: Pawn on the sixth rank

We start with an elementary observation. With a central pawn White can win in certain circumstances even if Black's king is in front of the pawn. This cannot happen with an a-pawn, so that with W♙a6 and B♔a8 the position is a draw unless White has immediate mate or win of the rook.

We make a subdivision:

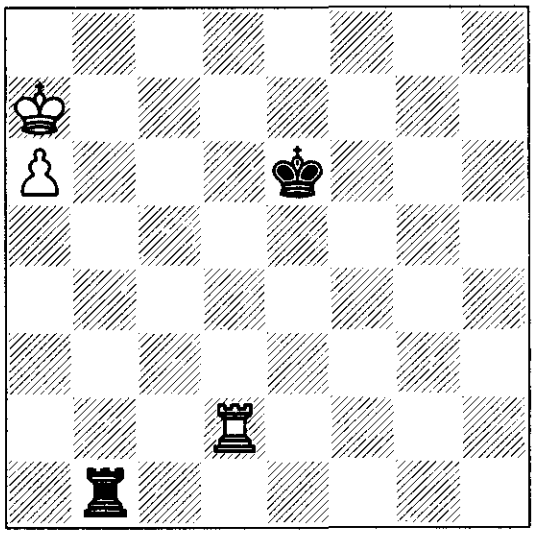
1.2.1: White's king is in front of the pawn 25
1.2.2: White's rook is in front of the pawn 27
1.2.3: White's rook is behind the pawn 46
1.2.4: Other situations 49

### 1.2.1: White's king is in front of the pawn

This case is not very interesting as it is very similar to the corresponding situation with the pawn on the seventh. If we imagine White's pawn on a6 and king on a7, with Black's rook on b1, then White can easily advance his pawn to the seventh by playing ♔a8 and a7, transposing into section 1.1.1.

(**30**): The result here is the same as if the pawn were on a7 and the king on a8, but the play is different. With White to play, 1 ♖d8! ♔e7 (1...♖h1 2 ♔b7 ♖b1+ 3 ♔a8 ♔e7 4 ♖b8! is similar) 2 ♖b8! ♖c1 and now there are two ways to win:

1) **3 ♖b4** (White must be careful not to play 3 ♖b3 or 3 ♖b5, which both allow Black to draw by 3...♔d7!) ♔d7 (3...♔d6 4 ♔b8 followed by a7 wins) 4 ♔b6 ♖c6+ (after other moves White wins with a7) 5 ♔b5 (with the rook on b5 White must play 5 ♔a5, when 5...♔c7 6 a7 ♖c1 draws) ♔c7 6 a7!



30 +/=

*Chéron, 1923*

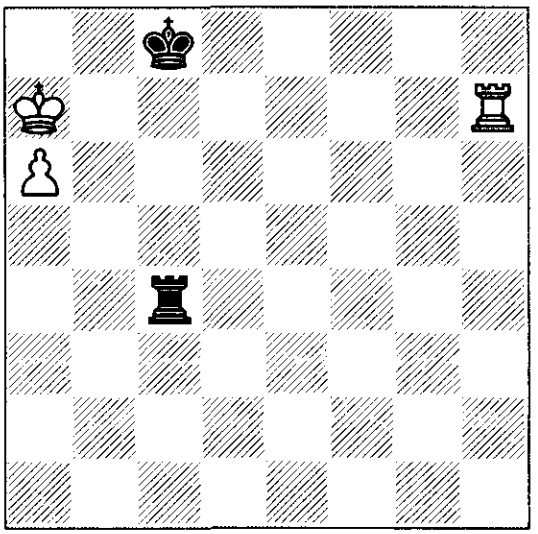
winning, but with the rook on b3 Black can draw by 6...♖b6+ because 7 ♔a5 is met by 7...♖xb3.

2) **3 ♔b7** (a slower but simpler win) ♖b1+ 4 ♔a8 ♖c1 5 a7 ♔d6 6 ♔b7! and wins as in diagram 2.

Black to move draws by 1...♔e7!, for example 2 ♖h2 ♔d7 3 ♖h7+ ♔c8 (3...♔c6 also draws, for example 4 ♖b7 ♖h1 5 ♖b2 ♔c7 6 ♖c2+ ♔d7 7 ♔b6 ♖b1+!) 4 ♖b7 ♖h1 5 ♖b6 ♖c1 (5...♔c7 and 5...♖h7+ also draw, but a waiting move loses because White threatens 6 ♖c6+ followed by ♔b7) and White cannot make progress.

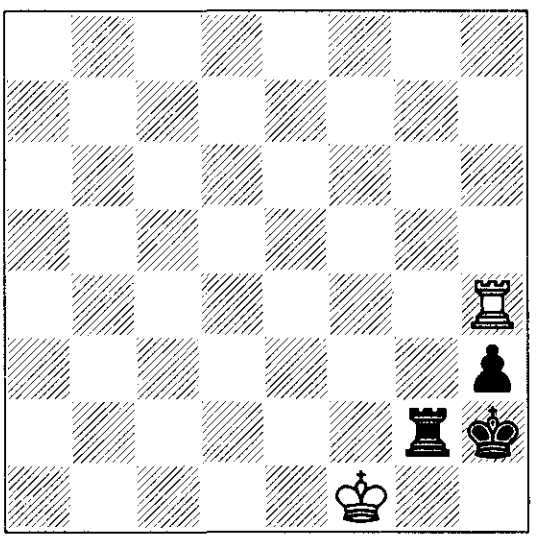
The main extra possibility with the pawn on the sixth is that White will succeed in bringing his king out from in front of the pawn. This can only happen in certain special cases.

**(31):** Here Black's pieces are miserably placed. His king is cut off on the back rank and his rook is too near White's king. If the rook were on c3 then the extra checking distance would allow Black to draw. With White to



31 +/=

play 1 ♔b6! ♖b4+ 2 ♔c6! ♖c4+ 3 ♔b5! ♖g4 4 ♖h8+! (but not 4 a7? ♖g5+! and Black draws) ♔c7 5 a7! wins. Black to play can draw with almost any move, for example 1...♖c1.



32 =/+

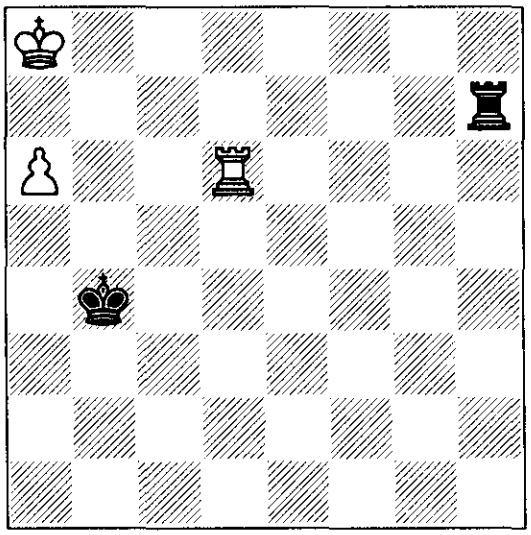
**Berner – Wolk**

*West Germany, 1954*

**(32):** White suffers from poor piece placing. Black to play can win by 1...♔g3! 2 ♖h8 ♖f2+! 3 ♔e1 h2! 4 ♖g8+ ♔f3 5 ♖f8+ ♔e4 6 ♖e8+ ♔f5 7 ♖f8+ ♔g6 8 ♖h8 ♖g2! and the pawn

promotes. White to play can draw with almost any rook move, for example 1 ♖h8. The exceptional nature of such positions becomes clear if we move White's rook to another square. With the white rook on any other square (excepting the first and second ranks and the g-file) the position is drawn even with Black to move. For example move the rook to f4; then 1...♔g3 2 ♖f8 ♖a2 3 ♖g8+! draws easily. White must only be careful not to allow his king to driven away from the f-file, for example with the white rook on b8 Black can try 1...♖g3 threatening 2...♖f3+, but 2 ♖f8 is the simplest defence.

Sometimes the analysis of positions with the pawn on the seventh rank comes in handy.



33 =/=

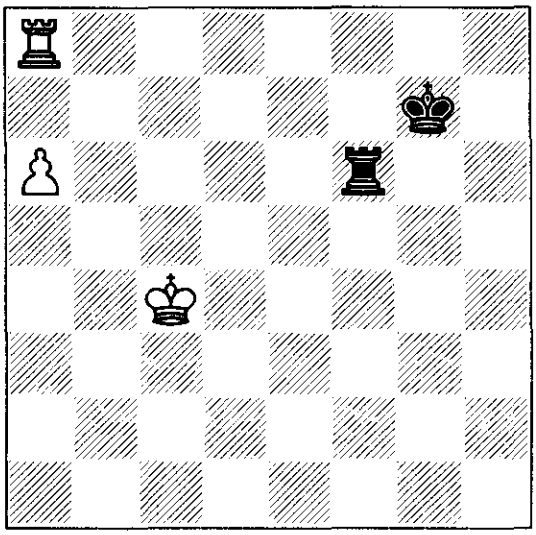
*Minev, 1985*

(**33**): Minev considered that Black to move could only draw by 1...♔c5, with 1...♔b5 losing to 2 a7. However we know from the analysis of diagram 6 that this is wrong, and that after 1...♔b5 2 a7 Black is able to draw by 2...♔c5!. In fact more than this is true; White has no threat in the diagram position and cannot win even if it is his turn to move. The analysis runs 1 ♖d5 (1 a7 ♔c5! and 1 ♔b8 ♔c5!) ♔c4! (not 1...♖h6? 2 a7 ♖b6 3 ♖d8 winning after 3...♔a4 4 ♖b8 or 3...♔a5 4 ♖d1, nor 1...♖h8+? 2 ♔b7 ♖h7+ 3 ♔c6 ♖h6+ 4 ♖d6 followed by ♔b6 and a7) 2 ♖e5 (2 ♖d1 ♔b5) ♔b4! (2...♖h8+? 3 ♔b7 and hides on a5) and draws in a similar way to diagram 6.

### 1.2.2: White's rook is in front of the pawn

This case is much more interesting than the previous one. With the pawn on a7 and rook on a8 White's king had no shelter from Black's rook checks, but with the pawn on a6 the a7-square is vacant. This provides a shelter when Black is checking along the files, so checks from this direction eventually run out. However, the a7-square provides no shelter from lateral checks, which leads to the following drawing position, which is fundamental for all endings of this type.

(**34**): We may as well take White to move. After 1 ♔b5 (by defending the pawn White threatens to activate his rook and win by 2 ♖c8) ♖f5+! (Black checks White's king away from the pawn) 2 ♔b6 ♖f6+! 3 ♔c5 ♖f5+ 4 ♔d4 ♖f6! (having forced the king back, Black once again ties down White's rook; 4...♖f4+? is a blunder since 5 ♔e5! prevents 5...♖f6 because of 6 ♖g8+, so Black would have to



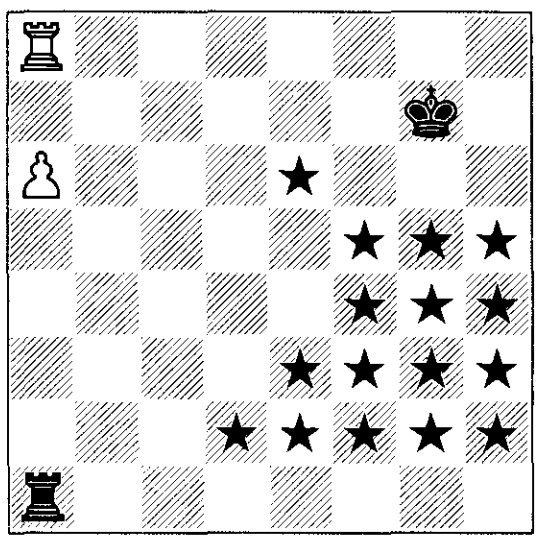
34 =/=

*Vancura*
*28 Rijen, 1924*

adopt the inferior defence 5...♖a4 which leads to a losing position analysed below) 5 ♔e5 ♖b6 6 ♔d5 ♖f6 (ready to start checking again when the king reaches b5) 7 a7 ♖a6 and draws. Vancura's discovery revolutionized the theory of ♖+a♙ v ♖ and many pre-1924 analyses appear completely incomprehensible to the modern eye because this drawing method wasn't known. The drawing idea of Diagram 34 recurs so frequently that henceforth we will refer to it as the 'Vancura draw'.

The fact that Black's rook should operate from the side is made clear if we move it to a1 in the above diagram. In this case White wins, even if Black is to play: 1...♖a5 2 ♔b4 ♖a1 3 ♔b5 ♖b1+ (or else the rook moves) 4 ♔c6 ♖c1+ 5 ♔b7 ♖b1+ 6 ♔a7 ♔f6 7 ♖b8 ♖d1 8 ♔b7 ♖b1+ 9 ♔a8 ♖d1 10 a7 ♔e7 11 ♔b7 and wins.

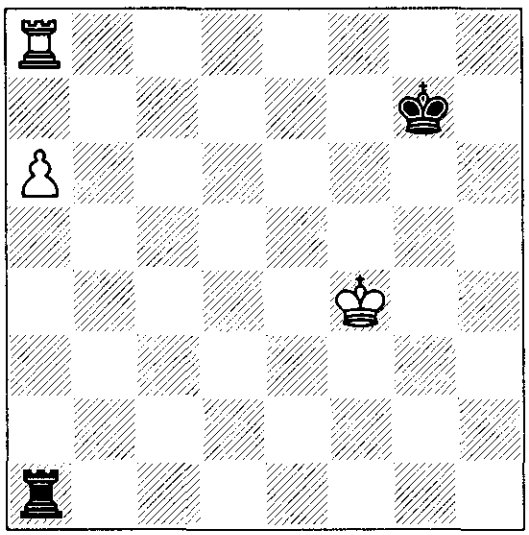
The situation with Black's rook on a1 occurs quite often in practice and we take some time to cover it in detail. It might seem that with White's king further away Black should be able to draw by approaching the a-pawn with his own king, but this is not the case. Black's king is trapped in the top right corner by the threat of a7, for example if Black's king strays to e7 then the reply a7 wins the rook because White's next move will either be ♖h8 or a rook check. Thus Black's king is restricted to the squares f7, g7, h7, f6, g6 and h6, for fear of a7 by White. Thus whether or not White can win when Black's rook is on a1 depends on whether Black can reach the Vancura draw by switching his rook to the lateral defence. In 1950, Romanovsky analysed this situation in detail and his work settled all the important questions. There are a number of difficult points in his analysis, with the result that these positions are still often misplayed over the board.



35 /=

*Romanovsky, 1950*
*Shakhmaty v SSSR*

**(35):** Black to play draws if White's king is on any of the starred squares in the above diagram. Otherwise White wins. This is Romanovsky's result, verified by the computer. We will consider the following king positions: W♔ on f4, e4, f5, e6, d3, d2 and c2, which taken together cover all the finesses in this ending. Diagram 35 is so important for all ♖+a♙ v ♖ endings that we refer to the winning positions as 'Romanovsky wins' and the above drawing area as the 'Romanovsky drawing zone'. We move on to the first of the specific cases.



36 /=

**(36):** The problem in this position is how Black is going to switch his rook to the third rank. With White's king on f3 this could be accomplished by 1...♖f1+ 2 ♔e4 ♖f6, but with the king on f4 this fails because of 1...♖f1+? 2 ♔e5 ♖f6 3 ♖g8+. Black has two possible drawing moves in the diagram and it worth giving both because one is misanalysed in almost all endgame books.

The simplest method is 1...♖a5 2 ♔e4 ♖b5 (this is critical moment; the threat is 3...♖b6, but White has a free move) 3 ♖a7+ (or 3 ♖c8 ♖a5! 4 ♖c6 ♔f7 5 ♔d4 ♔e7 6 ♔c4 ♔d7 with an easy draw) and now Black must play accurately:

1a) **3...♔f6?** 4 ♔d4 ♖a5 (4...♖b6 5 ♔c5 ♖e6 6 ♖h7 wins) 5 ♖a8! (5 ♔c4? ♔e6 6 ♖h7 ♔d6! draws) and now Black's king cannot move to the e-file, while White's king is near enough to the pawn to win.

1b) **3...♔h6?** 4 ♖b7 ♖a5 5 a7 ♔g6 6 ♔d4 ♔f6 7 ♔c4 ♔e6 8 ♔b4 ♖a1 9 ♔c5 and the white king penetrates to b8.

1c) **3...♔g6!** 4 ♖b7 (4 ♔d4 ♖b6! with the Vancura draw) ♖a5! 5 a7 ♔f6! 6 ♔d4 ♔e6 7 ♔c4 ♔d6 8 ♔b4 ♖a1 draws.

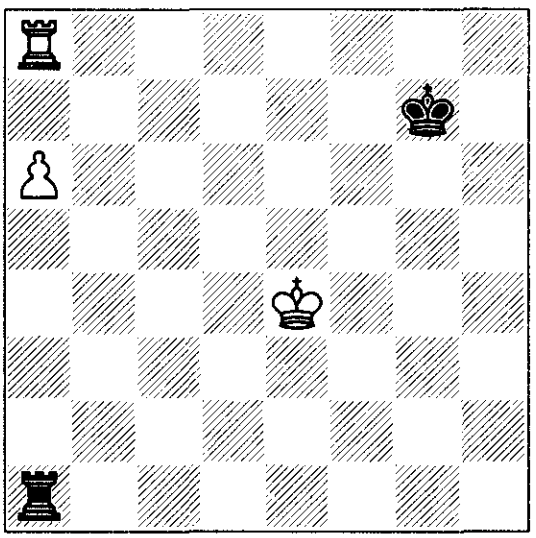
If this is the simple draw, you're probably wondering about the complicated one! It starts 1...♖c1, with the continuation 2 ♖a7+ (2 ♖b8 ♖a1! 3 ♖b6 ♖a5! 4 ♔e4 ♔f7 draws) ♔g6! (2...♔f6? 3 ♔e4! and White wins much as in line 1a above, e.g. 3...♔e6 4 ♖a8! or 3...♖c6 4 ♔d5 ♖e6 5 ♖h7) 3 ♖b7 and now:

2a) **3...♔f6?** (given by *ECE* and many other endgame books as drawing) 4 ♖b6+! ♔f7 (4...♔e7 5 a7 ♖a1 6 ♖h6! wins after 6...♔f7/d7 7 ♖h8) 5 ♔e5 and 5...♔e7 loses to 6 ♖b7+ followed by a7, while otherwise White's king penetrates to b7.

2b) **3...♖c5!** 4 ♔e4 (4 a7 ♖a5! draws) ♖a5! (4...♔f6? 5 ♖b8 ♖a5 6 ♖a8! and White has gained enough time with his king to win) 5 ♖a7 ♖b5

and we have transposed into the analysis of 1...♖a5 above.

Apart from these two possibilities, all other first moves lose for Black, for example 1...♖b1? 2 ♖a7+! ♔g6 (2...♔f6 3 ♔e4! as above) 3 ♖b7 ♖a1 4 ♖b6+! ♔f7 5 ♔e5! as in line 2a.

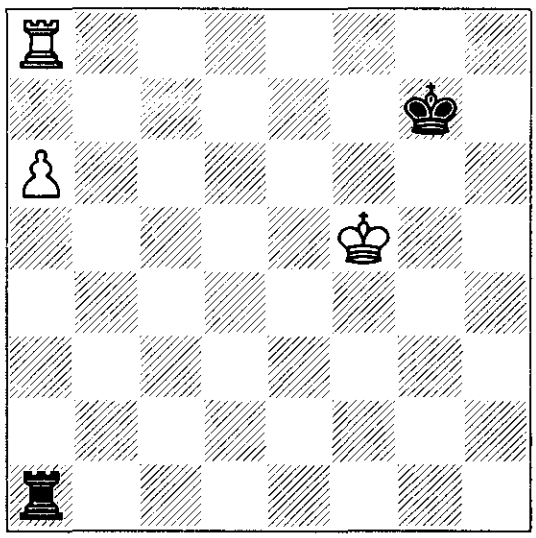


37 +/–

**(37):** We take Black to move. Thanks to the improved position of White's king there are no really good routes for Black's rook to reach the third rank (1...♖c1 2 ♔d5 covers c6 and 1...♖f1 2 ♔e5 ♖f6 allows 3 ♖g8+). This leaves two possible defences:

1) **1...♖a5** 2 ♔d4 ♖b5 3 ♖a7+ ♔f6 (or 3...♔g6 4 ♖b7 followed by a7 and Black's king is too far away) 4 ♖h7 (4 ♖b7? ♖a5! draws) ♖a5 (4...♔g6 5 ♖b7) 5 a7 ♔e6 and the simplest win is 6 ♖h6+ ♔d7/e7/f7 7 ♖h8, although 6 ♔c4 also wins.

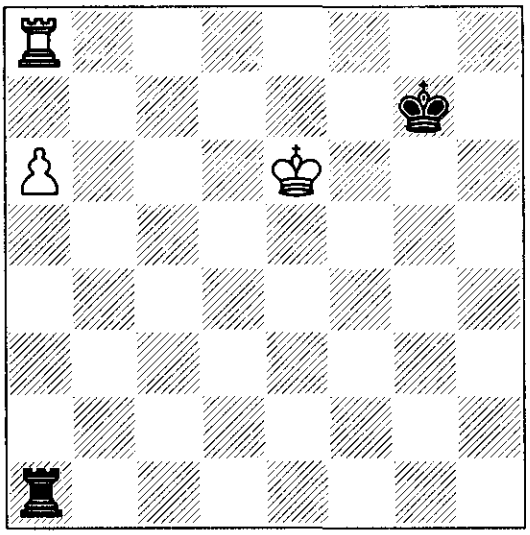
2) **1...♖h1** (aiming for h6) 2 ♖a7+! ♔f6 (2...♔g6 3 ♖b7) 3 ♔d5 ♖d1+ 4 ♔c6 ♖c1+ 5 ♔d7 ♖d1+ 6 ♔c8 ♖a1 (6...♖d6 7 ♖h7) 7 ♖a8 ♔e7 (7...♖e1 8 ♖b8 wins) 8 ♔b7 (now that White has lured Black's king out of the safe zone in the top right corner he can return with his own king) ♖b1+ 9 ♔c6 (not 9 ♔a7? ♔d7 draw) ♖c1+ 10 ♔b5 ♖b1+ 11 ♔c4 ♖c1+ 12 ♔b3 ♖a1 13 a7 and wins.



38 +/=

**(38):** With White to play 1 ♔e4 transposes to diagram 37 (although 1 ♔e5 is slightly quicker), so we take Black to play: 1...♖a5+! (other moves lose because with the king on f5 a check on a7 forces Black's king to a bad square, for example 1...♖c1 2 ♖a7+ ♔h6 3 ♖b7 wins easily) 2 ♔e6 (2 ♔e4 ♖b5 draws as in diagram 36) ♖h5! (the only good route to the third rank, for example 2...♖g5? 3 ♖a7+! ♔g8 4 ♔f6! ♖a5 5 ♔g6 ♔f8 6 ♖a8+ ♔e7 7 a7 and Black's king is out of the safe zone) 3 ♖a7+ (after 3 ♔d7 ♖h6! 4 ♔c7 ♖f6! we have a Vancura draw, for example 5 a7 ♖f7+! 6 ♔c6 ♖f6+! 7 ♔d5 ♖a6) ♔g8! (3...♔g6 4 ♖b7 wins) and Black draws as the unfortunate position of White's king prevents a rook move along the seventh rank. The

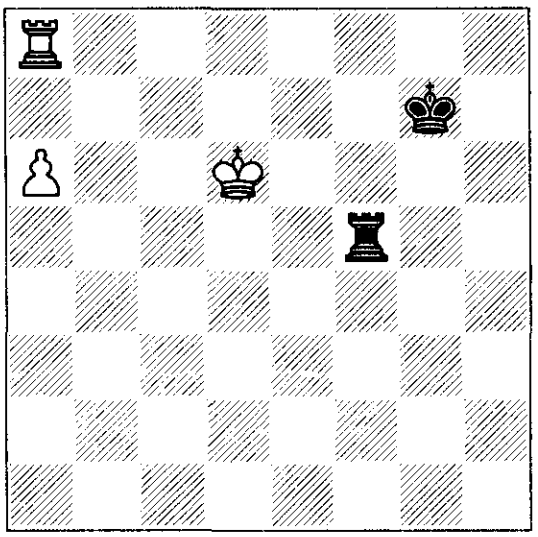
only chance is 4 ♖f7, but this fails to 4...♖a5! and White cannot play 5 a7?? because of 5...♖a6+. Normally White wins if Black plays his king to the back rank in reply to ♖a7+, but here the special tactical situation gives Black a draw.



39 +/=

(**39**): The analysis of the previous position provides Black's drawing line: 1...♖h1! 2 ♖a7+ ♔g8!, just as before. However the refutation of 1...♖g1? is quite interesting: White plays 2 ♔f5 (threat 3 ♖a7+) ♖a1 (2...♖f1+ 3 ♔e5) 3 ♔e4 (or 3 ♔e5) reaching diagram 37. The position after 1...♖h1! 2 ♔d6 arose in the game Ostojić-Conquest, Dortmund II 1987. Black can secure the Vancura draw by 2...♖h6+! 3 ♔c7 ♖f6!, but the game continued 2...♔f7? 3 ♔c6 (3 a7 wins immediately) ♔e7 (3...♖c1+ 4 ♔b7 ♖b1+ 5 ♔a7 ♔e7 6 ♖b8 is also lost) 4 a7 ♖c1+ 5 ♔d5 1-0.

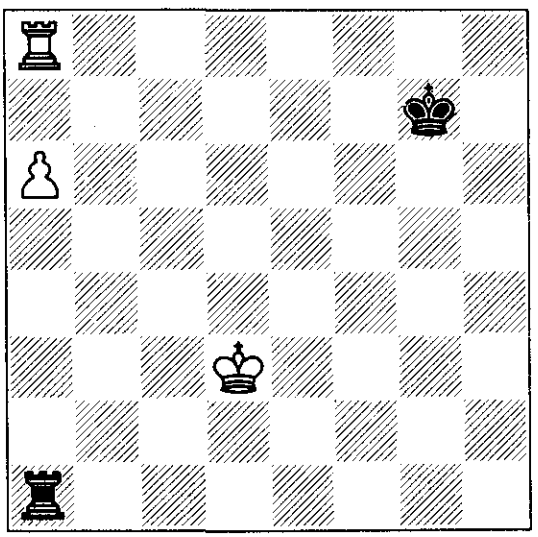
The following related position shows that in addition to knowing the basic ideas one must also be alert to tactical finesses.



40 +/=

*Original*

(**40**): White to play wins by 1 ♖a7+! ♔f8 (1...♔g6 2 ♖e7! wins) 2 ♔e6! (this paradoxical retreating move is the only way to win; the direct advance towards the pawn fails to 2 ♔c6 ♖f6+! 3 ♔b7 ♖f7+ 4 ♔b8 ♖f6! 5 ♖a8 ♔g7! with a Vancura draw) ♖a5 (the tactical point is that 2...♖h5 loses to 3 ♖f7+! and 4 a7; of course 2...♖f1 loses to 3 ♖b7) 3 ♖a8+ ♔g7 4 ♔d7 and White's king reaches b7.



41 +/–

**(41):** Black to play must meet White's threat to advance his king, but all his possible defences fail:

1) **1...♖d1+** 2 ♔c4! ♖d6 3 ♔b5 ♖d5+ 4 ♔c6 and Black cannot set up the Vancura draw.

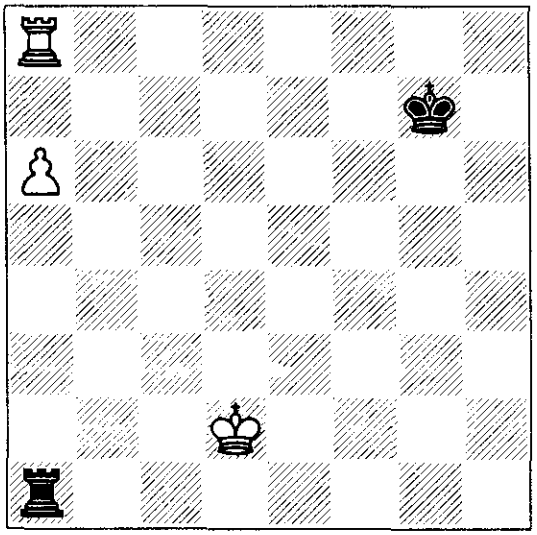
2) **1...♖b1** (1...♖f1 fails the same way) 2 ♖a7+ (2 ♔c4? ♖b6! draw) ♔f6 3 ♖h7 (3 ♖b7? ♖a1 draw) ♔g6 4 ♖b7 ♖a1 5 a7 wins.

3) **1...♖h1** (this cunning move aims to prevent White's ♖h7 after 2 ♖a7+ ♔f6) 2 ♔c4 (White can use the fact that Black's king blocks a rank in order to win) ♖h6 3 ♔b5 ♖h5+ 4 ♔b6 ♖h6+ 5 ♔b7 and White gets the tempo he needs to free his rook.

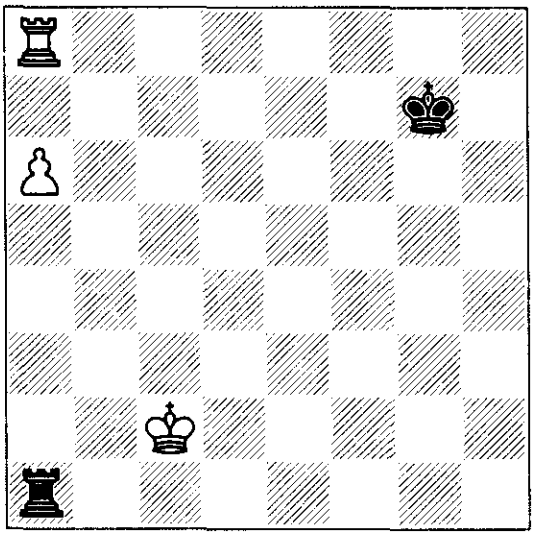
4) **1...♖a4** 2 ♔c3 ♖h4 (2...♖f4 3 ♖a7+ ♔f6 4 ♖h7 ♔g6 5 ♖b7) 3 ♖a7+ ♔f6 (3...♔g6 4 ♖b7 ♖a4 5 a7 wins as Black's king is one square too far away) 4 ♔b3! ♖h1 (4...♖h8 5 ♖b7 ♔e6 6 a7 ♖a8 7 ♔b4 wins, while 4...♔e6 takes the king outside the safe zone and loses to 5 ♖a8 followed by a7) 5 ♖a8 ♖a1 (or 5...♔g7 6 ♔c4 as in line 3) 6 ♔b4 and White has gained sufficient time with his king to reach the a7-square.

**(42):** Black to play can draw by 1...♖b1 2 ♖a7+ ♔g6! 3 ♖b7 ♖a1! 4 a7 ♔f6 and the king arrives in time.

**(43):** With Black to play White wins because he can gain a vital tempo by attacking the rook on a1. The critical line runs 1...♖f1 2 ♖a7+ ♔g6 3 ♖b7 ♖a1 4 a7 ♔f6 5 ♔b2! ♖a6 6 ♔b3 ♔e6 7 ♔b4 ♔d6 8 ♔b5 followed by ♖b6+ and ♖a6. Nor does 1...♖h1 help, for example 2 ♖a7+ ♔f6 3 ♔b3 ♖a1 4 ♖a8 and White's king has advanced.



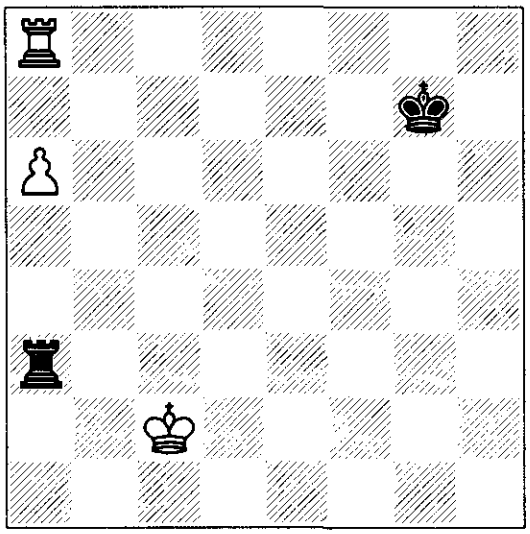
42 +/=



43 +/–

Play is very similar if the black rook starts on a different square on the a-file, so we content ourselves with one example.

**(44):** With White to play 1 ♔b2 ♖f3 (or else the king advances) 2 ♖b8 wins. Black to play draws by 1...♖h3! (using the defence of line 4 in diagram 41; this time it leads to a draw thanks to the better position of his rook; not 1...♖f3? 2 ♖a7+ ♔g6 3 ♖b7) 2 ♖a7+ ♔f6! (2...♔g6? 3 ♖b7 wins) 3 ♔b2 ♖h8! (surprisingly this is the only



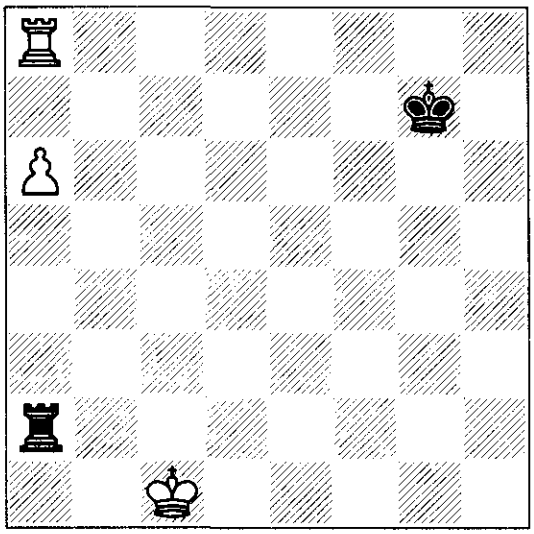
44 +/=

move to draw; other moves fail to meet the threat of 4 ♖b7) 4 ♔b3 (4 ♖b7 ♖a8 5 a7 ♔e6) ♔e6 5 ♔b4 ♔d6! 6 ♔b5 ♖b8+ 7 ♖b7 ♖xb7+ 8 axb7 ♔c7 with a draw.

Having finished our coverage of Romanovsky's analysis, we take a short interlude to correct a couple of mistakes in other endgame books. *ECE* makes a curious error in the following position:

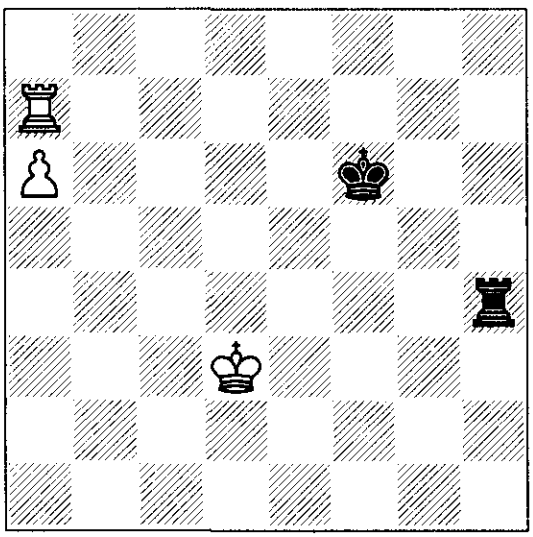
**(45):** This position is absolutely drawn because Black can transfer his rook to the third rank with a check, for example by 1 ♔b1 ♖a5! 2 ♔b2 ♖b5+ and ...♖b6. Oddly enough, *ECE* gives 1...♖a4 as a loss, even though it leads to exactly the same draw.

**(46):** After 1...♖a4 (1...♖b4 2 ♔c3 ♖b6 3 ♖h7 wins, as does 1...♔e6 2 ♖a8!) *ECE* gives as the main line 2 ♔c3, mentioning that 2 ♖a8 also wins. In fact 2 ♔c3? is a draw because Black can approach with his king by 2...♔e6 3 ♖a8 ♔d7 4 ♔b3 ♖a1, so only 2 ♖a8! leads to a win after 2...♔g7 3 ♔c3 transposing to diagram 41, line 4.



45 =/=

*ECE, 1985*



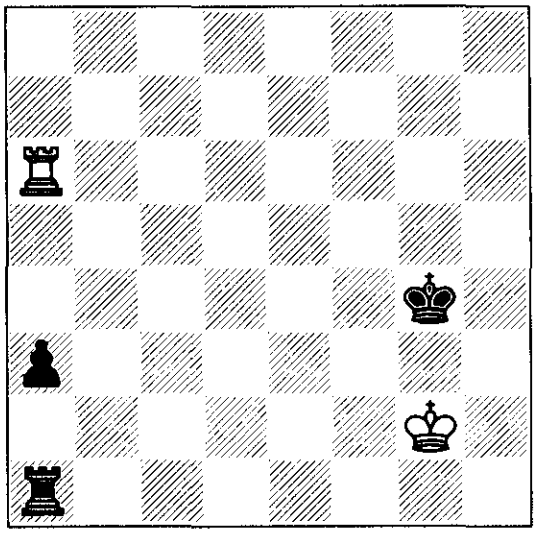
46 +/–

*ECE, 1985*

After this theoretical material, it is time to look at a few examples from practical play.

**(47):** Here Black's king is well within Romanovsky's drawing zone, so we know the position should be a draw. We follow the game continuation, which serves to demonstrate that even relatively strong players can mishandle such endings:

**1 ♖g6+?**



47 =/

**Brodsky – Khmelnitsky**
*Kherson, 1989*

White can hold the position most simply by 1 ♖a4+ ♔f5 2 ♖b4 ♖a2+ 3 ♔g3 ♖b2 4 ♖a4, just as in some of the positions above. The move played presents Black with two free tempi, which is just enough to turn the position into a win.

**1 ... ♔f4!**

Certainly not 1...♔f5?, when 2 ♖g3 is a Vancura draw. Now 2 ♖g3 is prevented because of 2...♖g1+.

**2 ♖a6**

There is nothing better. 2 ♖f6+ ♔e4! and 2 ♖c6 ♖a2+! are wins which we have seen before.

**2 ... ♔e4**
**3 ♖a4+ ♔e3?**

Returning the favour. The simplest win is by 3...♔d5 4 ♖f4 (4 ♖h4 ♔c5 5 ♖h3 ♔b4 wins) ♖a2+ 5 ♔g3 ♖b2, but 3...♔d3 4 ♖f4 ♖a2+ also wins, transposing to diagram 40.

**4 ♖g4?**

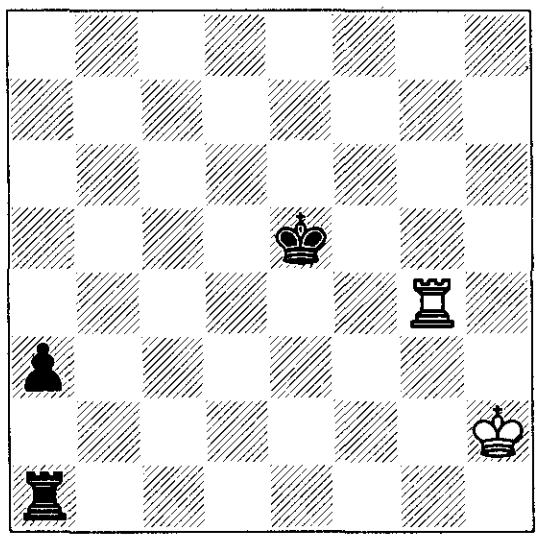
The final error. We have transposed into the analysis of diagram 38, where we know White can draw by 4 ♖h4!.

**4 ... ♖a2+!**
**5 ♔h3**

Or 5 ♔g1 ♔f3! 6 ♖a4 (6 ♖c4 ♖e2) ♔g3 7 ♔f1 ♖a1+ 8 ♔e2 a2 and Black wins.

**5...♖f2! 6 ♖a4 a2 7 ♖a3+ ♔d4 8 ♔g3 ♖b2 9 ♔f4 ♖f2+ 0-1**

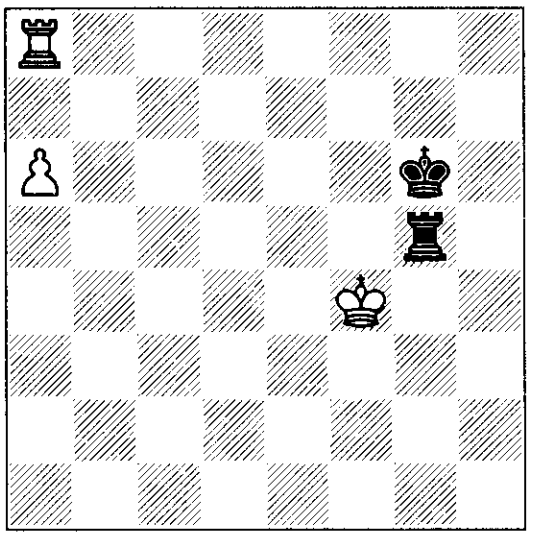
A strange way to end, but after 10 ♔g3 ♖b2 11 ♔f4 Black wins by 11...♔c4 12 ♔e4 (12 ♔e3 ♔b4 followed by ...♖b3+ and ...♖a3) ♔b4 13 ♖a8 ♔c3 penetrating to b1.



48 /+

**Smyslov – Donner**
*Palma de Mallorca, 1967*

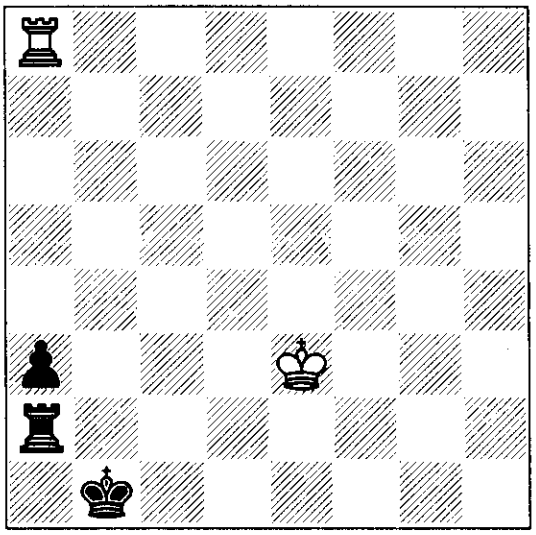
**(48):** 1...♖a2+! (Donner finds the only move to win; the threat was 2 ♖g3, and 1...♖b1 2 ♖a4! ♖b2+ 3 ♔g3! a2 4 ♔f3! leads to a draw) 2 ♔h3 (or 2 ♔g3 ♔d5 3 ♖a4 ♔c5 4 ♖a8 ♖a1 and Black's king is near enough to the a-pawn for an easy win) ♖b2 (White's king is too far away) 3 ♖a4 a2 4 ♔g3 ♔d5 5 ♔f3 ♔c5 6 ♔e3 ♔b5 7 ♖a8 ♔c4 0-1.



49 /–

**Suetin – Forintos**
*Budapest, 1970*

**(49):** After 1...♖a5 (or 1...♖f5+ 2 ♔e4! ♖f7 and now *ECE* offers the line 3 a6? ♔f6 4 ♔d5 as winning for White, even though Black draws by 4...♔f5! – see diagram 13; the correct method is 3 ♖c8 when 3...♖d7 4 ♖c1 and 3...♖a7 4 ♖c6+! ♔f7 5 ♔d5 ♔e7 6 ♔c5 ♔d7 7 ♖h6 win easily) White is able to play his king out of the Romanovsky drawing zone and win by 2 ♔e4 ♔f7 3 ♔d4 ♔f6 4 ♔c4 ♔f7 5 ♔b4 ♖a1 6 ♔b5 ♖b1+ 7 ♔c6 ♖c1+ 8 ♔b7 ♖b1+ 9 ♔a7 ♔e7 10 ♖b8! ♖c1 11 ♖b4 (see diagram 30) ♔d7 12 ♔b6 ♖c6+ 13 ♔b5 ♔c7 14 a7! ♖b6+ 15 ♔a5! 1-0.

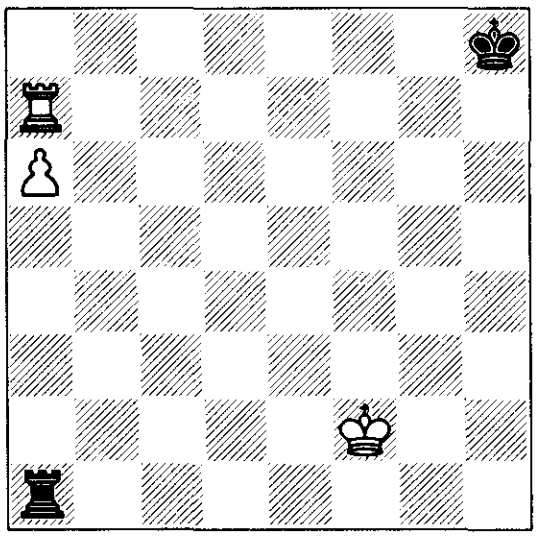


50 –/

**Obukhovsky – Estrin**
*correspondence game, 1972*

**(50):** Black's king is favourably placed near to his pawn, so it is not surprising that he wins. The game continued 1 ♔f4 (1 ♔d3 ♖h2 and 1 ♔d4 ♖d2+! 2 ♔c3 ♖c2+! 3 ♔b3 a2 win easily) ♔c2 (Black would like his rook on a1 so that his king can hide on a2, but 1...♖a1 2 ♖e8 threatens annoying checks from the side; it is possible to win this way but the line played is simpler) 2 ♔e4 (or 2 ♖c8+ ♔d2 and after 3 ♖a8 ♖a1 Black's king returns to a2, while 3 ♖d8+ ♔e1 4 ♖h8 ♖f2+ and 5...a2 is easy) ♖a1 3 ♔d4 (Black's threat is ...♔b2 and 3 ♔e3 is most simply met by 3...a2) ♖d1+! (but not 3...a2? 4 ♔c4 drawing) 4 ♔c4 ♖d3 5 ♖h8 ♖d2! (again 5...a2? allows White to escape: after 6 ♖a8! ♖c3+ 7 ♔d4! White can draw) 6 ♖a8 ♔b2! 7 ♖b8+ ♔c1! 8 ♖a8 a2! 9 ♔c3 ♖c2+ 10 ♔d3 ♔b1 0-1.

We now deal with some situations in which Black's king is not on g7. It is not surprising that Black's position is worse if his king is cut off on the back rank.



51 +/=

*Vancura, 1925*
*28 Rijen*

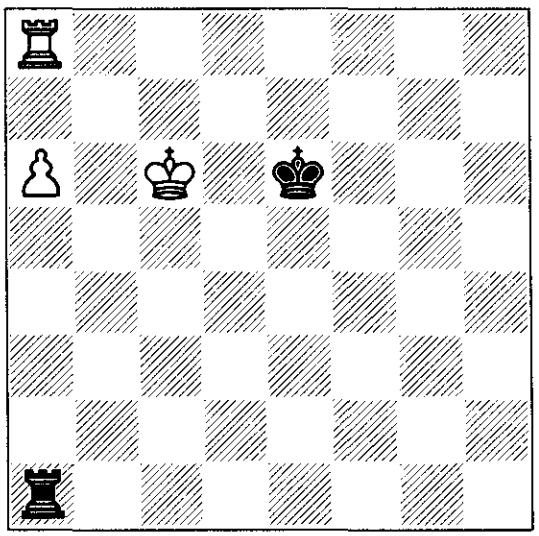
**(51):** If White to play were to carelessly check on a8 we would be back in the normal situation, with White's king within the Romanovsky drawing zone. However, here White can win by 1 ♔e2! (1 ♔e3? ♖e1+! 2 ♔d4 ♖e6! draws) and now:

1) **1...♔g8** 2 ♔d3 ♖d1+ (2...♔f8 3 ♖a8+ wins now that White's king is outside the drawing zone) 3 ♔c4! ♖d6 4 ♔b5 ♖d5+ 5 ♔c6 and wins.

2) **1...♖a3** 2 ♔d2! ♔g8 3 ♔c2! ♔f8 4 ♔b2 ♖a5 5 ♖a8+! ♔g7 6 ♔b3 with the usual win.

Black to play draws most simply by 1...♖a5 2 ♔e3 ♖e5+! 3 ♔d4 ♖e6!, but it is interesting to note that he can also continue 1...♔g8 2 ♔e2 ♖a3! 3 ♔d2 ♔f8! 4 ♔c2 (4 ♖a8+ ♔g7! 5 ♔c2 ♖h3! 6 ♖a7+ ♔f6! 7 ♔b2 ♖h8! is diagram 44) ♔e8! 5 ♔b2 ♖a5 6 ♖a8+ ♔d7! and Black's king can approach the pawn.

We now consider positions in which Black's king is not in the top right corner. If Black's king is in the open board he always has to watch out for a winning a7, as in the following position.



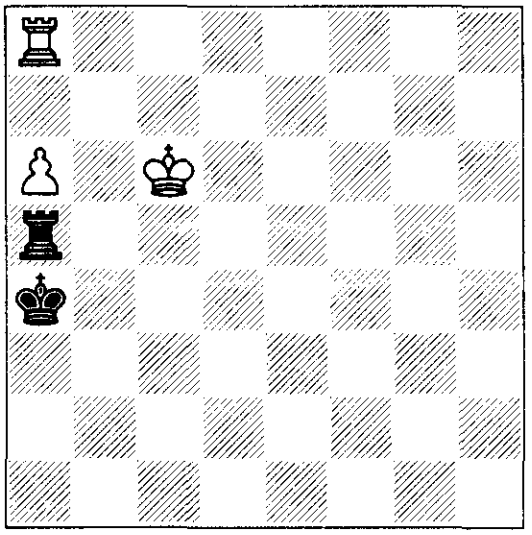
52 +/–

*Grigoriev, 1936*
*'64'*

**(52):** The threat is 1 a7, and after 1...♖c1+ 2 ♔b5 ♖b1+ 3 ♔c4 ♖c1+ 4 ♔b3 Black finds that his king is too far from safety because 4...♖a1 loses to 5 a7. On the other hand after 1...♔f7, heading into the safe zone, White wins by 2 ♔b7 and so on.

Just as in the analysis with the pawn on the seventh, there are two other ways Black can protect his king from a deadly rook check on the eighth rank. He can either shelter behind White's king, or he can hide on the a-file. Ganshin analysed positions of this latter

type in 1957. Firstly assume that Black's king is on or near the a-file.



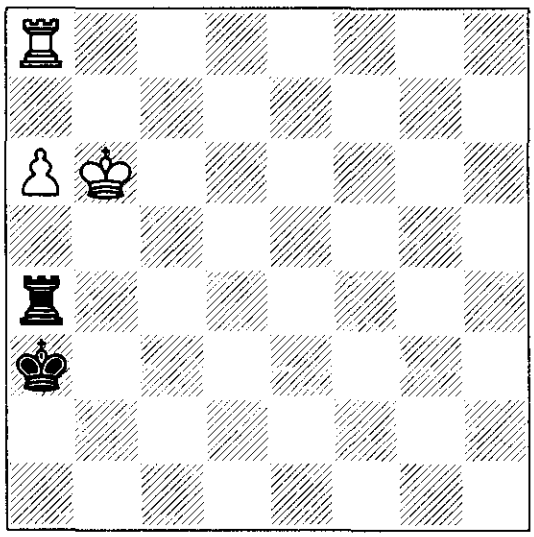
53 +/–

*Ganshin, 1957*
*Shakhmatny bulletin*

**(53):** White to play wins by 1 a7 (see diagram 11) ♔a3 (or 1...♖a6+ 2 ♔b7) 2 ♔b6 followed by a rook move. With Black to play 1...♔a3 2 ♔b6 ♖a4 3 ♖h8 ♖b4+ 4 ♔c5 ♖a4 5 ♖h3+ ♔b2 6 ♔b5 ♖a1 7 ♖h7 followed by a7 wins.

**(54):** This arose with White to play in the analysis of the previous position. With Black to play White wins by 1...♖b4+ (1...♖h4 2 ♖c8) and now there are two possible winning continuations:

1) **2 ♔a7** (*ECE* incorrectly gives this as leading to a draw) ♔a4 3 ♖d8 (not 3 ♖e8? ♖b5! 4 ♖e1 ♖h5 and White's rook is too far to the right for an effective interposition; *ECE* only gave 3 ♖b8? ♖h5 which is indeed drawn) ♖b1 (3...♖b5 4 ♖d1 ♖h5 5 ♔b7 ♖h7+ 6 ♔b8 ♖h8+ 7 ♔c7 wins) 4 ♖d5 ♖b2 5 ♔a8 ♖b3 6 a7 ♖b1 (with



54 +/–

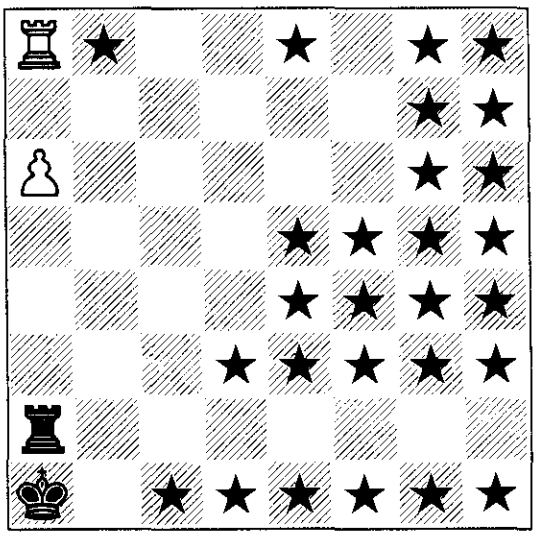
*Ganshin, 1957*
*Shakhmatny bulletin*

the black king on c4, White could win by ♖d8-b8, but it doesn't work here because of 7 ♖d8? ♔a5! 8 ♖b8 ♖h1) 7 ♖d2 ♖b4 (7...♔a3 8 ♖d8 does win, as does 7...♔a5 8 ♖a2+ ♔b6 9 ♔b8) 8 ♖d1 (threat 9 ♖a1+ ♔b5 10 ♔b7) ♔a3 9 ♖d8 and 10 ♖b8 wins.

2) **2 ♔c5** (this is the simplest) ♖a4 3 ♖a7 (Black is in zugzwang) ♔a2 4 ♔b5 followed by ♖h7 wins.

It might seem that Black has little hope for a draw with his king on the a-file, but this is not the case. He has two basic drawing ideas. The first is the familiar one of switching his rook to give checks from the side. Since his king is not obstructing the second rank the best file for the switch is undoubtedly the h-file. The second idea is to march his king up the a-file to attack White's pawn. The following positions develop these ideas.

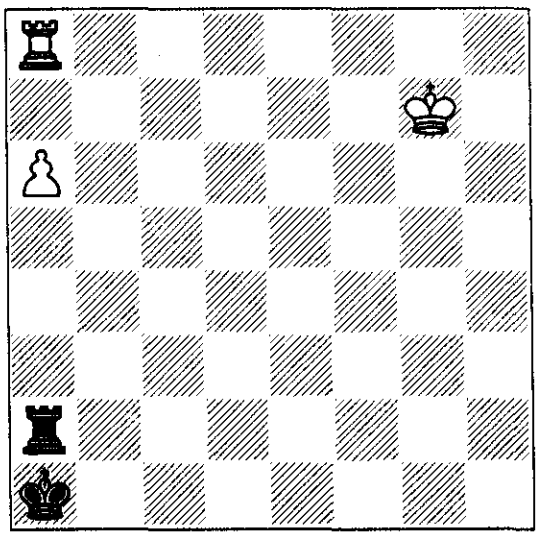
White's king must be added to the board. The following diagram shows the drawing zone with Black to move.



55 /=

*Original*

The most interesting case is the one with the king on g7.



56 +/=

*Original*

**(56):** Firstly we consider Black to move. The saving move is not easy to spot.

**1 ... ♖a4!**

The only drawing move, for very subtle reasons. We will see below that passive play by Black offers no defensive chances. Nor is Black able to switch his rook to the third rank when White's king is so far up the board, because White can interpose his rook (for example with W♔e7 the move ...♖h2 may be met by ♖f8! meeting ...♖h7+ by ♖f7 and ...♖a2 by ♖f6). Therefore Black must counterattack with his king. Unfortunately Black's king has to move to the b-file to pass his own rook and then he is vulnerable to a7 by White. It turns out that with the rook on a3 the king has to expose himself too soon, but putting the rook on a5 is equally bad because Black needs a5 free for his king. The square a4 is just right. Here are the alternatives:

1) **1...♖c2** (or b2/d2) 2 ♖f8! ♖g2+ 3 ♔f7 ♖a2 4 ♖a8! ♖c2 5 ♖e8! ♖f2+ 6 ♔e7 ♖a2 7 ♖a8! ♖b2 8 ♖f8 (8 ♖d8 also wins, but this is quicker) ♖b3 (8...♖a2 9 ♖f1+) 9 ♖f6 with an easy win. This is the characteristic winning method when White's king is on the seventh rank.

2) **1...♖a3** 2 ♔f7! ♔a2 3 ♔e7! (note that White must never put his king on the sixth or eighth ranks, because 3 ♔e6? ♖h3! 4 ♖f8 ♖a3! forces a repetition, while 3 ♔e8? ♖h3! 4 ♖d8 ♖h6! loses the pawn) ♔b3 (as mentioned above, 3...♖h3 fails to 4 ♖f8!) 4 ♔d7 ♔b4 (4...♔a4 also fails to 5 a7) 5 a7 and Black's king is stranded.

3) **1...♖a5** 2 ♔f7! (2 ♔f8? ♖h5! 3 ♔g7 ♖b5 4 ♖f8 ♖a5! 5 ♖f6 loses too much time and allows Black to draw by 5...♔b2!, but not 5...♔a2? 6 ♖b6! winning) ♔a2 (2...♖c5 3 ♖e8! wins as

in line 1) 3 ♔e7! ♔a3 4 ♔d7! ♔b4 5 ♔c6! ♖c5+ (if Black's rook were anywhere else on the a-file Black could draw by ...♔a5) 6 ♔d6 ♖a5 7 ♖b8+! (the king transfer from d7 to d6 has prevented the reply ...♔c5) ♔c4 8 ♖b6! ♖h5 9 a7! and White wins.

**2 ♔f7 ♔a2!**

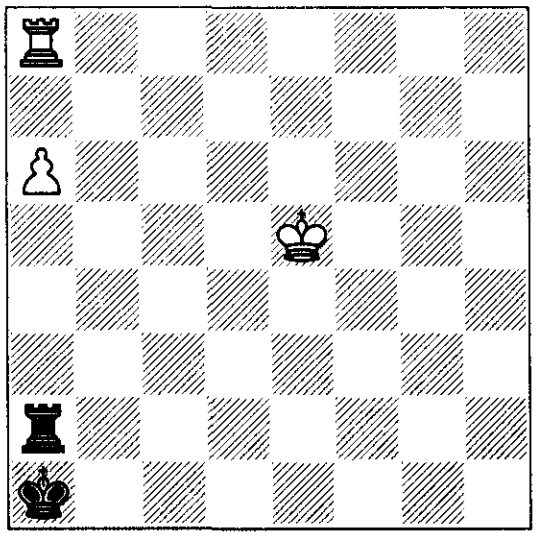
It is interesting to note that playing the king to the b-file prematurely loses: 2...♔b2? 3 ♔e6! (3 ♔e7? lets Black correct his mistake by 3...♔a3!) ♔a3 (3...♖h4 loses to 4 a7 when there is a check on b8) 4 ♔d5! (White has crossed the dangerous sixth rank) ♔b4 5 ♖b8+! ♔c3 6 ♖b6 and wins.

**3 ♔e7 ♔a3!**

3...♔b3 4 ♔d6! loses as in the previous note.

**4 ♔d7 ♔b4! 5 ♔c6 ♔a5! 6 ♖h8 ♖c4+! 7 ♔b7 ♖b4+! 8 ♔a7 ♖b5!** (accuracy is still required; White threatened to win by 9 ♖h5+ ♔a4 10 ♔a8 as in line 1 of diagram 54) **9 ♖h1 ♖g5** and draws.

With White's king on f7 and Black to move we have a position arising in line 1 of the above analysis. It follows that the above diagram is a win with White to play. There is one tactical point when White's king is on f6. Normally this would allow Black to play 1...♖h2, but here White can reply 2 ♖g8 and 2...♖a2 loses to 3 ♖g1+. With White's king on f8 play transposes into the above win after 1...♖h2 2 ♔g7! (2 ♔g8? ♖h6 or 2 ♖e8? ♖h6) ♖a2 (2...♖b2 3 ♖f8) 3 ♔f7. Against the king on e8 Black draws by 1...♖h2! 2 ♖d8 ♖h6, but with the king on c8 or d8 White can meet 1...♖h2 by 2 ♖b8. Finally with the king on b8 Black draws by 1...♖h2 and White cannot prevent the sideways checks.



57 +/=

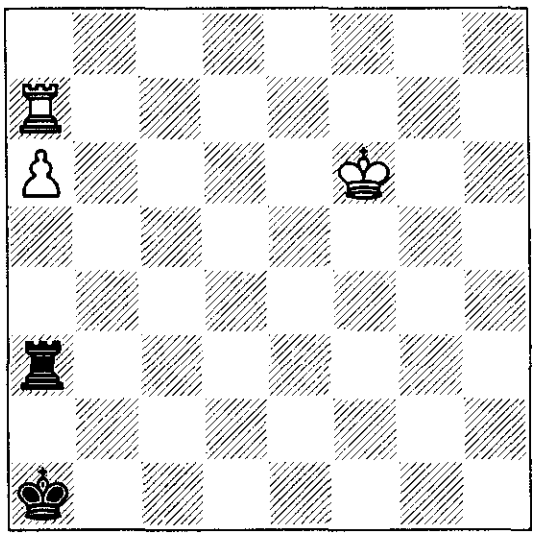
*Original*

**(57):** With White's king on the other side of the dangerous sixth rank play is somewhat different. Black to play draws by 1...♖a5+!, which forces White's king to decide between two evils. After 2 ♔d4 ♔a2! 3 ♔c4 ♔a3! the king is shut out and White can make no progress, while 2 ♔d6 puts the king on the 'mined' sixth rank and allows the drawing 2...♖h5 3 ♖e8 ♖a5!. White to play wins by 1 ♔d5 ♖a5+ 2 ♔c6 ♖h5 3 ♖d8 and White's king is close enough to defend the pawn.

The crucial question is whether Black has time to cut off White's king along a rank and move his king up the

a-file to set up a blockade. This explains why diagram 57 is a draw when White's king starts on d3 (by 1...♖a4! 2 ♔c3 ♔a2!), but with the king on c3 White wins.

Curiously enough the situation is different when White's rook is on a7. The main reason is that Black to play has a new defence. He starts checking on, say, the second rank. White can only avoid perpetual check by playing his king to the eighth, but then Black plays his rook to the sixth rank attacking the pawn.



58 +/–

*Original*

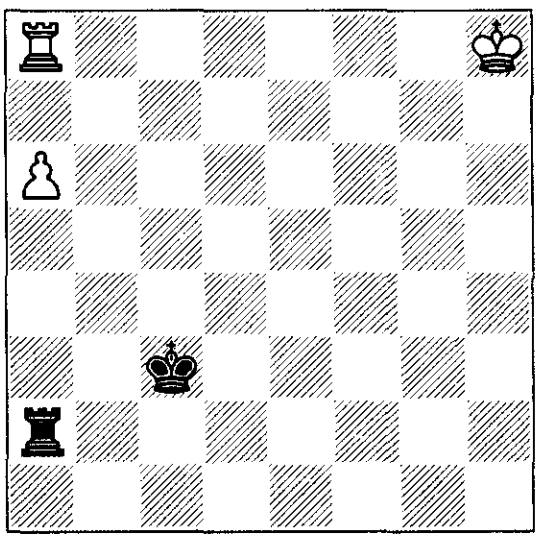
**(58):** This position makes the difference clear. We take Black to move. There are three main defences:

1) **1...♖f3+** (Black tries the defence mentioned above, but it normally doesn't work when his rook is on the third rank; had Black's rook started on a2 he would be able to draw by 1...♖f2+!) 2 ♔e7 ♖e3+ (2...♖a3 3 ♖a8 wins as in the previous analysis) 3 ♔d7 ♖d3+ 4 ♔c6 ♖c3+ 5 ♔b5 ♖b3+ 6 ♔a4 ♖b6 (if Black's rook were on the second rank he could continue checking) 7 ♔a5! ♖b2 8 ♖c7 and wins.

2) **1...♖a2** (Black tries to set up the drawing position with his rook on the second) 2 ♖a8! (2 ♔e6? allows a draw after 2...♖e2+! 3 ♔d7 ♖d2+! 4 ♔c7 ♖c2+! 5 ♔b8 ♖c6! 6 ♔b7 ♖h6 and White will be checked from the side) and White wins as in diagram 56.

3) **1...♔a2** (Black covers a3 and b3 to give himself more rook checks, while stopping White winning with ♖a8) 2 ♔e6 (2 ♖a8? ♖a4 draws as above) ♖e3+ (in fact this still doesn't draw because the checks only force the king as far back as the fourth rank) 3 ♔d5 ♖d3+ 4 ♔c4 ♖d6 (4...♖a3 5 ♖a8) 5 ♔b5! ♖d5+ 6 ♔c6 ♖a5 7 ♔b6 and wins.

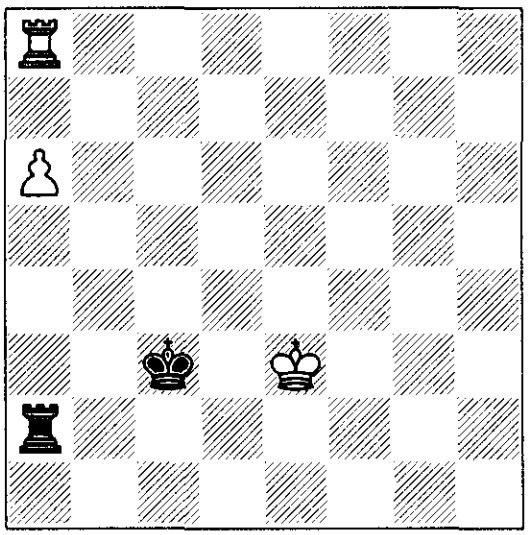
Using these ideas we can tackle some of the positions proposed by Ganshin in 1957.



59 +/=

*Ganshin, 1957*
*Shakhmatny bulletin*

**(59):** White to play wins with 1 a7. With Black to play, 1...♔b2! (Black heads for the a-file in order to meet a7 by ...♔a1) 2 ♔g7 (2 ♖b8+ ♔c3 draws) ♖a4 (or 2...♖a5, but not 2...♔a1? when 3 ♔f7 puts White's king in the winning zone) 3 ♔f7 ♔a3 4 ♔e7 ♔b4! 5 ♔d6 ♔b5 draws.



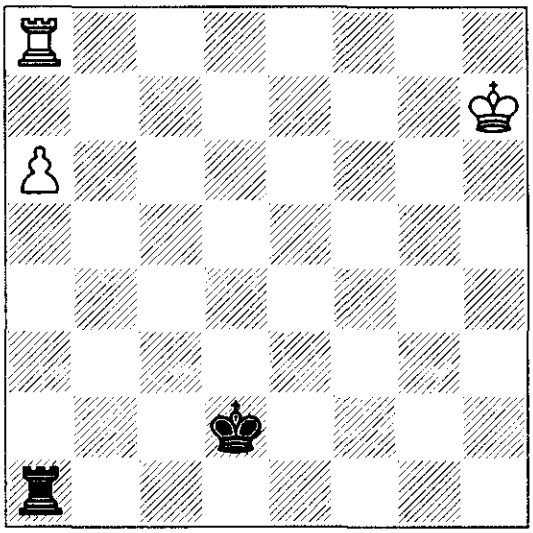
60 +/=

*Ganshin, 1957 (version)*
*Shakhmatny bulletin*

**(60):** Again we need only consider Black to play. 1...♖a3! (the only drawing move; after 1...♔b2/b3? 2 ♔d4! ♖a5 3 ♖b8+! and 4 ♖b6 White wins, while 1...♔b4? fails to 2 a7) 2 ♔e4 (2 a7 ♔b2+ hides the king and draws) ♔b4! 3 a7 (3 ♔d5 ♔a5 draws, but not 3...♔b5 4 ♖b8+!) ♖a4! (this tactical point gains a tempo and enables Black to hide his king behind the rook) 4 ♔d5 ♔a3! and draws.

In the next position Black saves himself with an unusual idea.

**(61):** It might seem that Black's king is too far away from the safety of the a-file to achieve a draw, but using



61 +/=

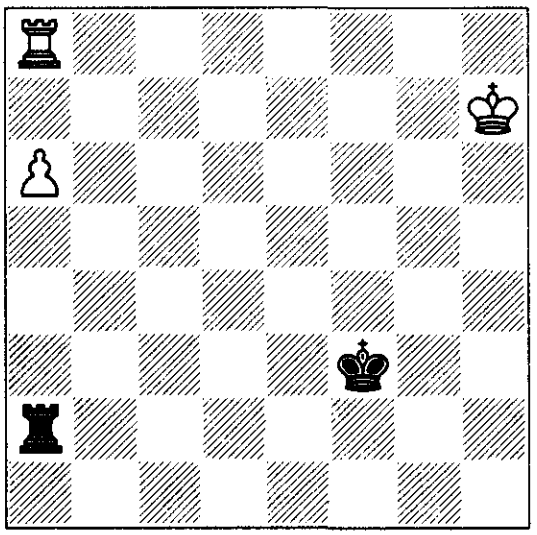
*Ganshin, 1957 (version)*
*Shakhmatny bulletin*

the unfortunate position of White's own king Black can switch his rook to the side of the pawn. 1...♖c1! (not 1...♖b1? 2 a7 ♖b7+ 3 ♔g6 ♖d7 4 ♔f6 followed by ♔e6) 2 ♔g6 (2 a7 ♖c7+! 3 ♔g6 ♔c3! 4 ♔f6 ♔c4! 5 ♔e6 ♔c5! draws, as does 2 ♔g8 ♖c7!) ♖c7! (2...♖c6+? 3 ♔f5 ♔c3 4 a7 wins) 3 ♔f6 ♔c3! (3...♔d3? 4 ♔e6 ♔c4 5 ♔d6! ♖h7 6 a7! wins, so Black's king must head directly for the a-file) 4 ♔e6 ♔b4 5 ♔d6 ♖h7 draws. Black's drawing idea only works because White's king is on the seventh rank. If we move the king to h6 or h8 then the initial position is transformed into a win for White.

Ganshin published a similar position, but with Black's king on c3. This allows alternative drawing ideas, e.g. 1...♖a4 2 a7 (2 ♔g6 ♔b4) ♖c4!. Moreover *ECE* incorrectly claims that (with the king on c3) 1...♖e1 loses to 2 ♔g6 ♖e7! 3 ♔f6 ♖c7! 4 ♔e6, but we already know from the above analysis

that 4...♔b4 draws (*ECE* only gives 4...♔c4?).

We have dealt with positions in which the black king shelters from White's rook by hiding on the a-file. In the following position Black employs the defence of hiding behind White's king, much as in diagrams 9 and 10.



62 +/=

**(62):** Similar positions based on this idea were published by Chéron in 1955 and Ganshin in 1957.

White to play wins by 1 a7. Black to play can draw by using White's king as a shield: 1...♔g4! (not 1...♔g3? 2 a7! ♔h4 3 ♔g6! and wins as in diagram 10) 2 ♔g6 (2 a7 ♔h5!) ♖a1! (White has no threat, so Black needs a waiting move, and it turns out that this is the only move not to weaken Black's position; any king move loses to a7 and we will see later why 2...♖a3 fails) 3 ♔f6 ♔f4! 4 ♔e6 ♔e4! 5 ♔d6 ♔d4! 6 ♔c6 (6 a7 ♖a6+! 7 ♔c7 ♔c5! draws) ♖c1+! (6...♔c4? 7 a7 wins) and now:

1) **7 ♔b7** ♖b1+! 8 ♔a7 ♔c5 9 ♖c8+ (9 ♖b8 ♖h1) ♔d6 10 ♖b8 ♖h1 is a simple draw.

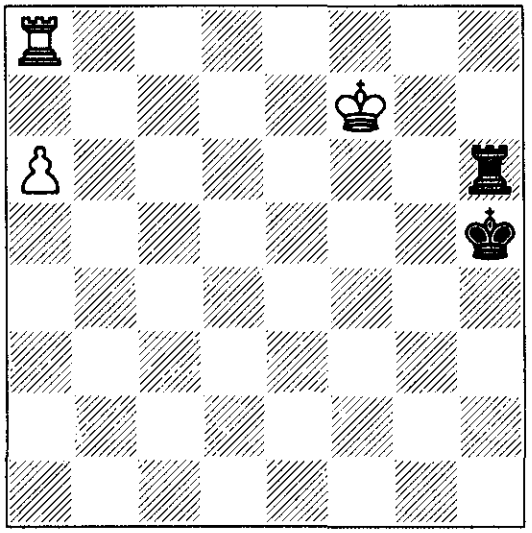
2) **7 ♔d7** ♖a1! (7...♔d5? 8 ♖d8 ♖a1 9 ♔c7+! ♔c5 10 ♖d6! ♖h1 11 ♖d7! ♖a1 12 ♔b7! wins) 8 ♔d6 ♖a2! (just as before this is the only waiting move; White can now try to bring his king back to b5 and a4, but Black can defend) 9 ♔c6 ♖c2+! 10 ♔b5 ♖b2+! 11 ♔a4 ♔c4! 12 ♖c8+ (12 ♔a3 ♖b3+ 13 ♔a2 ♖b6 14 a7 ♖c6! draws) ♔d5! (12...♔d4? 13 ♖c7 ♔d5 14 a7! wins) 13 ♔a5 ♔d6 and Black draws.

3) **7 ♔b5** would win if Black's rook were on c3, for example 7...♖b3+ 8 ♔a4 ♖b6 9 a7, which explains why 2...♖a3 loses. But with the rook on c1 Black draws by 7...♖b1+ 8 ♔a4 ♔c5 9 ♖c8+ (9 a7 ♖a1+ and ...♔b6) ♔d6 10 ♔a5 ♖a1+.

Black's final defensive idea is that of hiding his king on the same file as his rook (as in diagram 20). This can only occur when the rook is operating from the side of the pawn. We start with Black's rook and king on the h-file.

**(63):** Chebotarev's study is unsound, but the intention and refutation are both interesting. 1 ♔e7 (1 a7 ♖h7+! 2 ♔e6 ♔h6! 3 ♔f6 ♔h5! is drawn) and now:

1) **1...♔h4?** (this is the only move mentioned by the composer) 2 ♔d7! (Black has wasted time and cannot now reach the Vancura draw) ♔h5 3 ♔c7 ♔h4 4 ♔b7 (White's first step is to cross the sixth rank with his king; this involves a march to the queenside to force a rook check from Black)



63 =/=

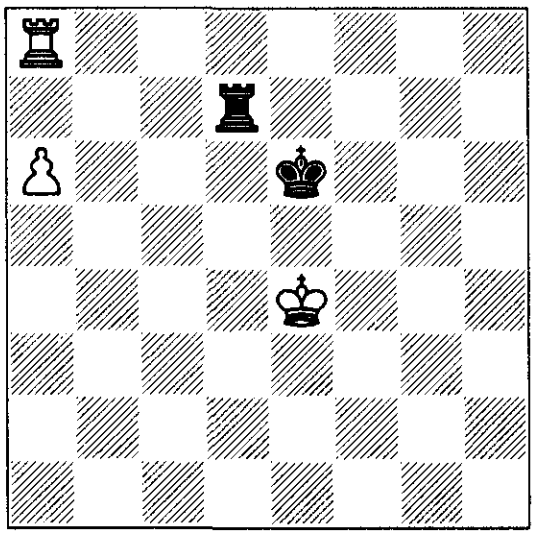
*Chebotarev, 1987*
*Special Commendation,*
*Birnov Memorial Tourney*

♖h7+ 5 ♔c6 ♖h6+ 6 ♔d5 ♖h5+ 7 ♔d4 ♖h6 8 ♔e4 ♔h5 9 ♔f5 ♖h7 (9...♔h4 10 a7 ♖h7 11 ♔g6 wins) 10 ♖c8 ♔h4 11 ♖c1 and, after switching the rook behind the pawn, White wins easily.

2) **1...♔g5?** (at the end of line 1 Black lost quickly because his king was pinned to the edge of the board; an alternative plan is to transfer his king and rook to the g-file, a defence which forces accurate play by White) 2 ♔d7! ♖g6 3 ♔c7 ♔g4 4 ♔b7 (threatens a rook move) ♖g7+ 5 ♔c6 ♖g6+ 6 ♔d5 ♖g5+ (6...♔g5 7 ♔e5 is the zugzwang position White is aiming for) 7 ♔e4 (it might appear that White can save time by 7 ♔d4 ♖g6 8 ♔e4, but 8...♖e6+ holds White up) ♖g6 8 ♔d4 (this waiting move is the key to the winning process) ♔g5 (8...♖d6+ 9 ♔e5 ♖g6 10 a7 and 8...♖g5 9 ♖b8 ♖a5 10 ♖b6 ♔f5 11 ♔c4 ♔e4 12 ♔b4 ♖a1 13 ♔c5 also win) 9 ♔e5 and Black is in a fatal zugzwang; 9...♔g4 loses to 10 a7, while 9...♖g7 10 ♖b8 is similar to the previous bracket.

3) **1...♖g6!** (Black must act quickly and set up the Vancura drawing position before White's king arrives on the queenside) 2 ♔d7 (2 a7 ♖g7+ 3 ♔f6 ♖h7! draws) ♔h6! 3 ♔c7 (3 a7 ♖g7+! 4 ♔c6 ♔g5! draws) ♔h7! and Black has succeeded in his aim.

When analysing other positions we have to bear in mind the results of diagrams 16-20.



64 =/–

*Original*

**(64):** This position of reciprocal zugzwang is the analogue of diagram 18, indeed with Black to play 1...♔d6 2 a7! is a direct transposition.

Other defences also fail, for example:

1) **1...♖e7** 2 ♔d4! (we know from section 1.1.2 that with the pawn on the 7th rank White wins when Black's pieces are on the e-file but draws when they are on the f-file; therefore 3 a7 is a threat) ♔f6 (trying to shift to the

f-file; 2...♔f5 is met the same way, while 2...♖f7 fails to 3 ♔c5 ♖f5+ 4 ♔b6 ♖f6 5 ♖h8 ♔d5+ 6 ♔b5 ♖f7 7 ♖h6 followed by ♔b6 and a7) 3 ♖c8 (3 a7? ♖f7 draw) ♖a7 (Black cannot prevent ♔c5) 4 ♖c6+! ♔e7 5 ♔c5 ♔d7 6 ♖h6 ♔c7 7 ♖h7+ ♔b8 8 ♖h8+! ♔c7 9 ♔b5 wins.

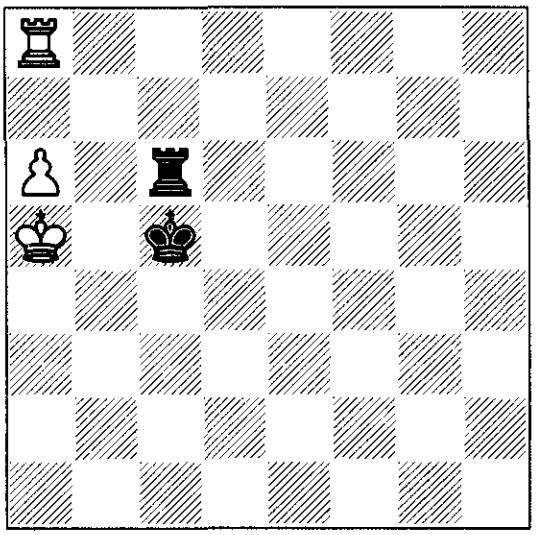
2) **1...♖f7** 2 ♔d4! gives Black an extra tempo but this doesn't help him and White wins as in line 1.

3) **1...♔f6** 2 ♖h8 and now Black is in zugzwang. 2...♖a7 3 ♖h1 threatens 4 ♔d5 and after 3...♔g6/g7, 4 ♖a1 wins, while 3...♔e6 runs into 4 ♖h6+. Other rook moves along the second rank are met by 3 ♔d5, and finally 2...♔g6 3 ♖h1 followed by ♖a1 leaves the black king too far away.

4) **1...♖c7** 2 a7! ♖e7 3 ♔d4 wins for White.

White to play cannot win diagram 64. After 1 a7 ♔d6! we have diagram 18 with White to move, but alternatives are also answered by ...♔d6 and Black's king can approach the pawn.

In order to understand diagram 66, it is first necessary to take a look at the following important position.

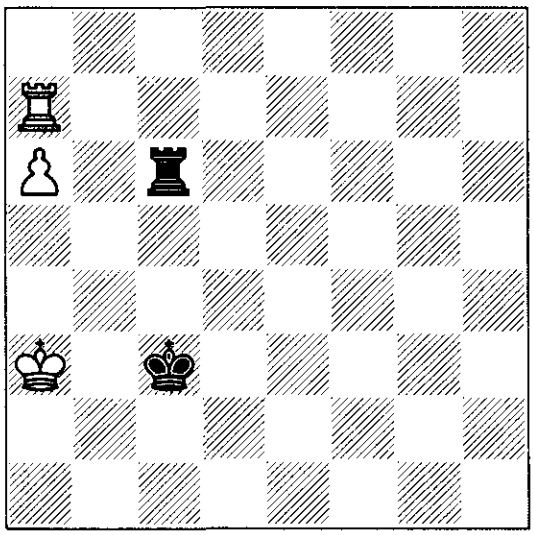


65 +/–

*Original*

**(65):** Black to play loses at once, e.g. 1...♔c4 2 a7 ♖c5+ 3 ♔b6 ♖b5+ 4 ♔a6 or 1...♖c7 2 a7! when Black is in zugzwang (see diagram 20). White to play wins by 1 ♖a7! (not 1 a7? ♖c7! and White is in zugzwang, nor 1 ♖h8? ♖c7! 2 ♖h1 ♔c6! 3 ♖h6+ ♔c5!) ♔c4 (the threat was ♖b7 intending a7, and 1...♔d6 loses to 2 ♖h7 ♖c1 3 a7!) 2 ♖h7 ♖c5+ 3 ♔b6 ♖b5+ 4 ♔c6 ♖a5 5 ♔b7 ♖b5+ 6 ♔c8 and the pawn advances.

In the same way that diagram 64 is related to diagram 18, the following position is related to diagram 20.



66 =/–

*Original*

**(66):** Once again we have reciprocal zugzwang. Firstly we take Black to play:

1) **1...♔c4** 2 ♔a4! (this is a second position of reciprocal zugzwang) ♔d5 (2...♔c5 3 ♔a5! is diagram 65, while 2...♖h6 loses to 3 ♖c7+ and 4 a7) 3

♖d7+! (3 ♔b5? ♖c5+! 4 ♔b6 ♖c6+! 5 ♔b7 ♔c5! 6 ♖a8 ♖b6+ draws) ♔e6 (3...♔c5 4 ♔a5! wins) 4 a7! ♖a6+ 5 ♔b5! ♖a1 6 ♖h7 wins.

2) **1...♔d4** 2 ♔b4! (certainly not 2 ♔a4? ♔c4! – see the white to play analysis below) ♖b6+ 3 ♔a5! ♖b1 4 ♖c7 ♖a1+ 5 ♔b6 ♖b1+ 6 ♔c6 ♖c1+ 7 ♔d7 and wins.

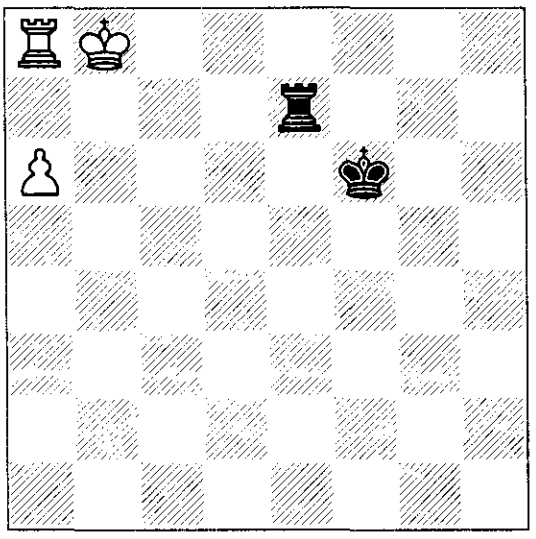
3) **1...♖c4** (1...♖c5 2 ♔a4!) 2 ♖a8! (this is a third position of reciprocal zugzwang) ♖c5 (2...♖c6 3 ♔a4! ♔c4 4 ♖a7 transposes to line 1) 3 ♔a4! ♔c4 4 ♖b8 ♖c7 (4...♖c6 5 ♔a5! ♖c5+ 6 ♔b6! ♖b5+ 7 ♔c7! ♖c5+ 8 ♔b7 ♖b5+ 9 ♔a8 followed by a7 wins) 5 ♖b7 ♖c6 6 ♔a5 ♖c5+ 7 ♔b6 ♖b5+ 8 ♔c7 wins.

White to play cannot win. The only try is 1 ♔a4 (1 ♖a8 ♔c4 2 ♔a4 comes to the same thing) ♔c4! and now:

1) **2 ♖a8** ♔d5! (2...♖c5 3 ♖b8 is line 3 above, while 2...♔c5 3 ♔a5! is diagram 65) 3 ♔b5 (3 a7 ♔c5! 4 ♔a5 ♖c7! draws) ♖c5+! drawing as in line 1 above, note to White's third move.

2) **2 ♔a5** ♖c5+! 3 ♔b6 ♖b5+! (if White's rook were on a8 then he could win by heading for e6 with his king) 4 ♔c6 (or 4 ♔c7 ♖c5+ 5 ♔b8 ♔b5!) ♖c5+! (4...♖a5? 5 ♖a8! wins) when both 5 ♔b7 ♔b5 and 5 ♔d6 ♔b5 lead to a draw.

The following position is truly incredible.



67 =/–

*Original*

**(67):** Believe it or not this is also reciprocal zugzwang. Firstly we take White to play. There are two possible lines:

W1) **1 ♔c8** (threat 2 ♖b8, activating the rook) ♔e6 (Black's king is just close enough for this counterattack to work) 2 ♖b8 ♔d6 3 ♖b6+ ♔c5 4 ♖h6 ♔b5 with an easy draw.

W2) **1 ♖a7** ♖e6! 2 ♔b7 (2 ♔c7 ♔g7! 3 ♖a8 ♖f6! is a Vancura draw and 2 ♔c8 doesn't threaten anything, although Black has to be careful because 2...♔g6! is his only waiting move!) ♔g7! (White was threatening 3 ♖a8 ♖e7+ 4 ♔c6 ♖e6+ 5 ♔d5 ♖e5+ 6 ♔d4 ♖a5 7 ♔c4 and wins as in diagram 36, line 1a; note that in this line Black never had time to set up a position with his king on g7 and rook on f6) 3 ♖a8 ♖e7+! 4 ♔c6 ♖e6+! 5 ♔b5 (now 5 ♔d5 ♖f6 results in a clear draw) ♖e5+! 6 ♔c4 ♖e6! with a Vancura draw.

The key to understanding why Black loses when he is to move lies in the twin duties performed by Black's king in the above lines. In the first line the king had to head for the queenside while in the second the destination was g7. When Black is to move he has to go one way or the other (rook moves

also have their defects) and White can choose his plan accordingly. The analysis is:

B1) **1...♔g6** 2 ♔c8! (threatening to activate the rook by 3 ♖b8) ♖e8+ (2...♖e6 3 ♔b7 ♖e7+ is the same; the black king is too far away for the counterattack because 2...♔f6 3 ♖b8 ♔e6 loses to 4 ♖b7!) 3 ♔b7! ♖e7+ 4 ♔c6 ♖e6+ 5 ♔d5! (White wins because Black's king is on g6 instead of g7) ♖e7 (5...♖f6 6 a7) 6 ♖c8 and once the rook escapes White wins.

B2) **1...♔e5** (1...♔e6 2 ♖a7! is similar) 2 ♖a7! ♖e6 (2...♖e8+ 3 ♔c7! ♔d5 4 ♔b6! ♖e6+ 5 ♔b5! ♖e1 6 ♖d7+! ♔e6 7 ♖d4 wins, but not 3 ♔b7? ♔d6!) 3 ♔b7! (threat ♖a8, since Black's king is far from the safety of g7) ♔f6 4 ♖a8! ♖e7+ 5 ♔c6 and wins as mentioned in the note to Black's second move of line W2 on the previous page.

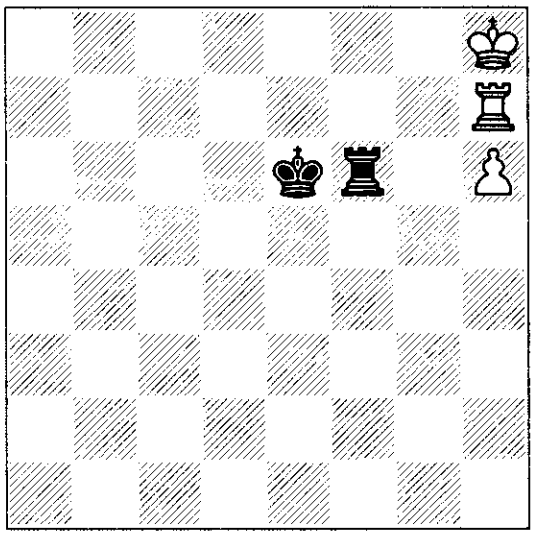
B3) **1...♔f5** 2 ♖a7! ♖e6 3 ♔b7 ♖e7+ (3...♔f6 is line B2) 4 ♔b6! ♖e6+ 5 ♔b5! ♖e5+ 6 ♔c4 ♖e4+ (6...♖a5 7 ♖a8) 7 ♔d3 ♖a4 8 ♖a8! ♔g6 9 ♔c3 ♔g7 10 ♔b3 with a Romanovsky win.

B4) **1...♖e1** (or anywhere else on the e-file) 2 ♔b7 ♖e7+ 3 ♔c6 wins as in line B2.

B5) **1...♖d7** 2 ♔c8 ♔e6 (or 2...♖e7 3 ♖b8 ♔e6 4 ♖b7!) 3 ♖b8! and thanks to the unfortunate position of the rook on d7, White can meet 3...♔d6 by 4 ♖b7.

B6) **1...♖g7** (f7 and h7 are the same; the rook is blocked by Black's king) 2 ♖a7! ♖g8+ 3 ♔c7 ♔e5 (if 3...♖g7+, then 4 ♔b6) 4 ♖b7 ♔d4 5 a7 ♔c5 6 ♖b1 wins.

We finish this section with a study which features an unusual tactical point.



68 +/

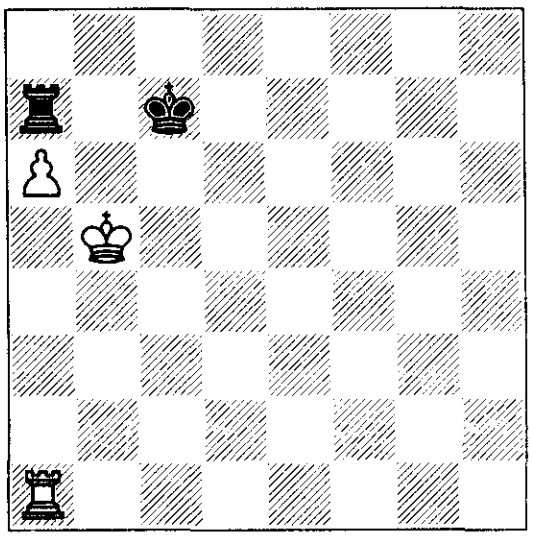
*Katsnelson, 1973*
*Special HM, Shakhmaty v SSSR*

**(68):** 1 ♔g8! (threat 2 ♖a7) ♖g6+ (1...♖f1 2 ♖g7 wins) 2 ♔f8! ♖f6+ 3 ♔e8! ♔f5 (3...♖g6 4 ♖e7+! ♔f6 5 h7 or 3...♔d5 4 ♖d7+!) 4 ♖f7! ♔g6 5 h7! ♖a6 and now the only move to win is the spectacular 6 ♖f6+! and White reaches the ending of queen v rook.

## 1.2.3: White's rook is behind the pawn

This is a much less interesting situation. Assuming we have, for example, W♖a1 and ♙a6 against B♖a7, the question is whether or not White's king can reach b6 and displace Black's rook. The following position is a marginal case.

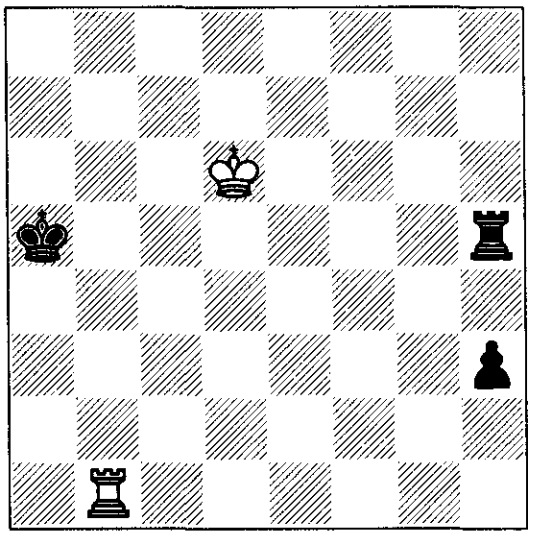
**(69):** White to play wins by 1 ♖h1 ♔b8 (1...♖a8 2 ♖h7+ ♔d6 3 a7) 2 ♖h8+! ♔c7 3 ♖g8 putting Black in



69 +/=

*Minev, 1985*

zugzwang. Black to play draws by 1...♔b8! (after 1...♖a8? White wins by 2 ♖c1+! ♔d7 3 ♖h1 ♖b8+ 4 ♔a5! ♖b2 5 a7! ♖a2+ 6 ♔b6! ♖b2+ 7 ♔c5! ♖c2+ 8 ♔b4 and now 8...♖a2 9 ♖h8 and 8...♖c8 9 ♔b5 win for White) 2 ♔b6 ♖h7 (some players might prefer the flashy 2...♖b7+) with an easy draw for Black.



70 =/+

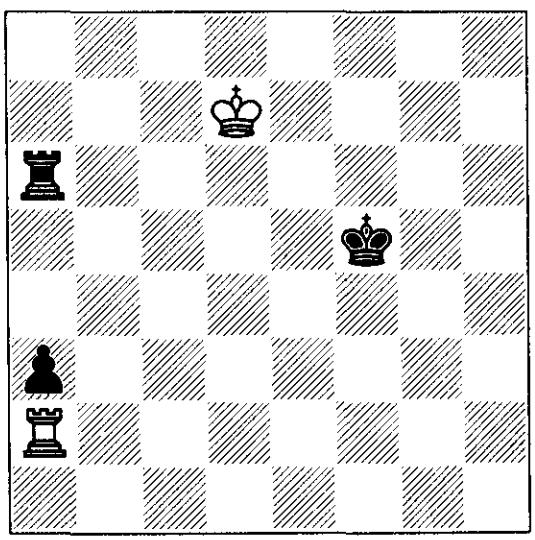
*Przepiorka, 1926*
*2nd Mention, Magyar Sakkvilag*

**(70):** This position arises in the course of Przepiorka's study. The study is sound because the position is indeed drawn, but not for the reasons given by the composer. White may play:

1) **1 ♖h1?** (the composer's move) ♔b4 (Przepiorka only analysed 1...h2, for which see line 2) 2 ♔e6 ♔c4 3 ♔f6 ♔d4 4 ♔g6 ♖h8! 5 ♔f5 (5 ♔g7 ♖h4 only delays the end) ♔e3! 6 ♔g4 h2! (Black plays ...h2 only after he has deprived White's king of the f4-square) 7 ♔g3 ♖g8+! 8 ♔h3 ♔f2! and wins.

2) **1 ♔e6** (White keeps the black king pinned to the a-file and forces ...h2 before bringing the king across) h2 2 ♖h1! ♔b4 3 ♔f6 ♔c4 4 ♔g6! ♖h8 5 ♔f5 ♔d3 6 ♔f4! (the point is that Black's king is not yet on e3 so White has access to f4: 6 ♔g4? transposes to line 1) ♔e2 7 ♔g3! ♖g8+ 8 ♔f4! drawing as in diagram 22.

The following practical example features a tactical point which is important in this type of ending.



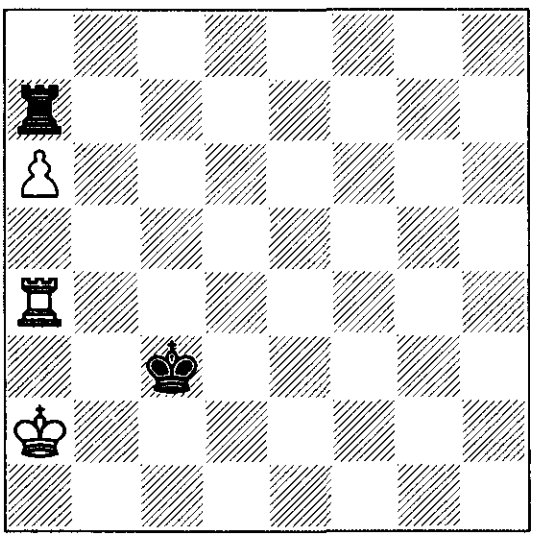
71 -/

**Hebert – G.Garcia**

*Novi Sad Olympiad, 1990*

**(71):** White was to move in the game which continued 1 ♔c7 (White must try to bring his king to b4 although, as we shall see, even this fails to guarantee a draw) ♔e5 (or 1...♔e4) 2 ♔b7 ♖a4! (2...♖a5? 3 ♔b6! ♖a8 4 ♔c5! draws) 3 ♔b6 ♔d4! 4 ♔b5 (after 4 ♖h2 Black wins by 4...♖a8!) ♖a8! 5 ♔b4 ♖b8+! (this is the tactical point; White can't take the pawn because of ...♔c3) 6 ♔a4 (or 6 ♔a5 ♔c4!) ♔c3! 0-1 because of 7 ♖xa3+ (or else the enemy pawn promotes) ♔c4! winning for Black.

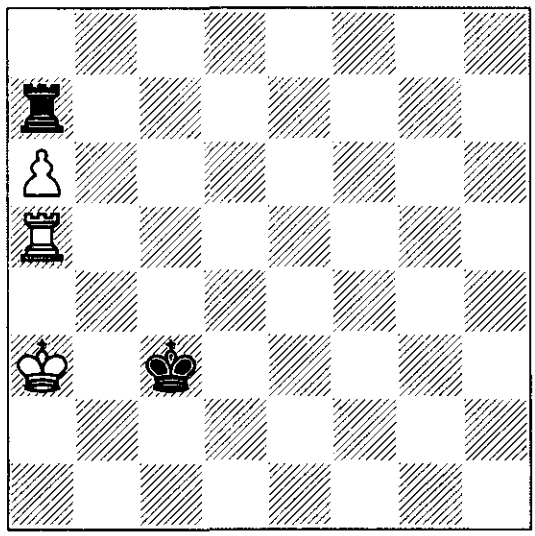
The most interesting situation occurs when White's king is also on the a-file.



72 =/–

*Original*

**(72):** This is another reciprocal zugzwang. It is fairly clear that Black to play will lose, for example 1...♖h7 (after 1...♔d2/d3 2 ♔b3 White's king reaches b6, and similarly after 1...♔c2 2 ♖a3! Black must permit ♔b3) 2 ♖a3+! (2 a7? ♖h2+! 3 ♔a3 ♖h1! draws) ♔b4 3 a7! ♖h2+ 4 ♔b1 ♖h1+ 5 ♔c2 and wins. White to play can only draw because after 1 ♔a3 (the only reasonable move) ♖h7 2 ♖g4 (2 a7 ♖h1! and 2 ♖a5 ♖h1 3 ♖c5+ ♔d4! 4 ♖c2 ♖h6! are drawn) ♖a7 (2...♖h1 also draws) 3 ♖g6 ♔c4! 4 ♔a4 ♔c5! 5 ♔a5 ♖h7 6 ♖g1 ♖c7! 7 ♖h1 ♔c6! 8 ♖h6+ ♔c5! White cannot make any progress.



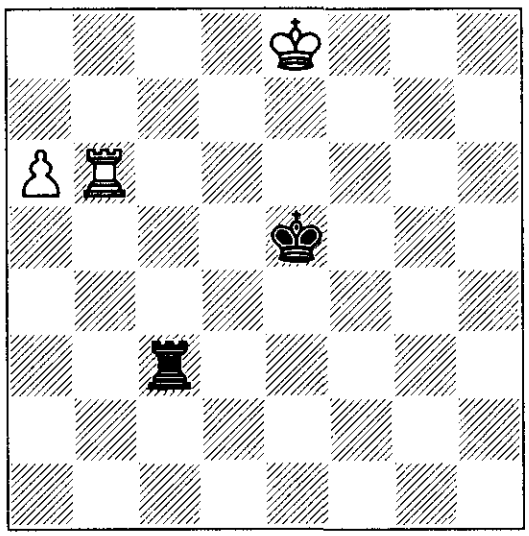
73 =/–

*Original*

**(73):** The play in this related reciprocal zugzwang is slightly different. If Black is to play, 1...♔c4 (keeping White out of b4; here 1...♖h7 loses to 2 a7) 2 ♔a4! (reciprocal zugzwang again) ♖h7 (otherwise ♔b5) 3 ♖b5 (threat 4 ♖b7 followed by 5 ♖c7+) ♖h1 (3...♖a7 4 ♔a5 ♖h7 is the same, while 3...♖c7 4 ♖b7 ♖c6 5 ♔a5 is hopeless) 4 ♔a5! ♖h7 5 ♖b7 ♖h5+ 6 ♔a4! ♖h6 (6...♖h1 7 ♖c7+ is no better) 7 ♖c7+ ♔d5 8 a7 and wins. With White to play, the continuation 1 ♔a4 (1 ♖a4 ♖h7 leads to a draw as in diagram 72) ♔c4! 2 ♔a3 ♔c3! is totally drawn.

### 1.2.4: Other situations

There are too many other possibilities to provide a detailed survey of each one, so we give a few examples demonstrating some of the more important points. First, we look at some positions in which White's rook defends the pawn from the side.



74 +/–

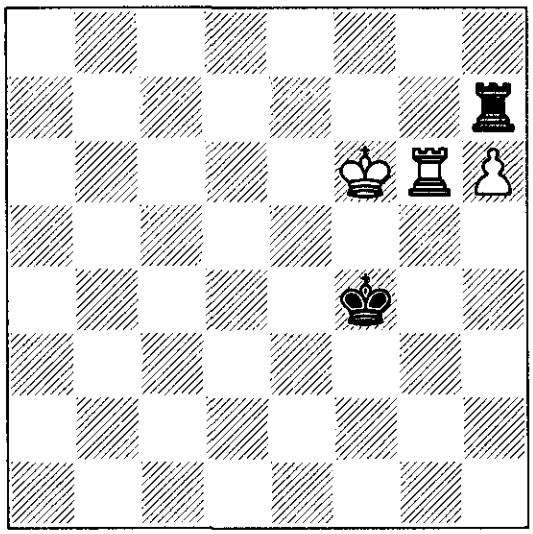
*Chéron, 1955*
*Journal de Genève*

(**74**): We take Black to play. There are two main lines:

1) **1...♔d5** 2 ♔d8! (2 ♔d7? ♖h3 3 ♖b5+ ♔c4! 4 ♖a5 ♖h7+! 5 ♔d6 ♖h6+! 6 ♔e7 ♖h7+! 7 ♔f6 ♖a7 draws) ♔c5 (the threat is a7 and 2...♖h3 3 a7! wins as in line 2; this explains why White's king has to stay off the seventh rank at move 2) 3 a7! ♖a3 4 ♖b7! ♔c6 5 ♔c8! ♖h3 6 ♖h7! (after 6 ♖c7+ ♔b6 White must return to b7) ♖a3 7 ♖c7+ followed by ♔b8.

2) **1...♖h3** 2 ♔d8! (once again White must avoid 2 ♔d7? ♔d5!) ♔d5 (2...♖h8+ 3 ♔c7! ♖h7+ 4 ♔c6! ♔d4 5 ♖b7 ♖h6+ 6 ♔b5! ♖h5+ 7 ♔b4 ♖h1 8 ♖d7+ and 2...♖h7 3 ♖b7! ♖h8+ 4 ♔c7! also win) 3 a7! ♖h8+ (3...♖a3 4 ♖b7 transposes to line 1) 4 ♔c7! ♖h7+ 5 ♔b8! and White's king escapes the checks on a6.

It is interesting to note that the following position is reciprocal zugzwang.



75 =/–

*Original*

(**75**): We have already seen that if the position is shifted up by one rank then we again have reciprocal zugzwang (diagram 22). With White to play, 1 ♔e6 ♖a7 leaves White with no constructive moves, but with Black to play the win is quite subtle. After 1...♖a7 (1...♔e4 2 ♔g5 ♖a7 3 ♖b6 followed by ♔g6 wins) we have:

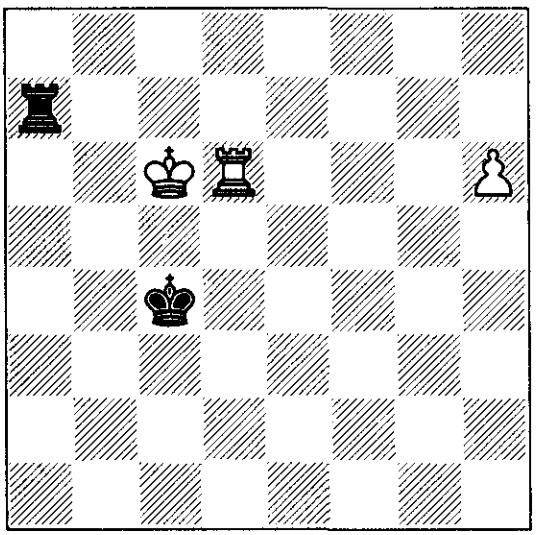
1) **2 ♖g8?** ♖a6+! 3 ♔g7 ♖a7+! 4 ♔g6 ♖a6+! 5 ♔h5 ♖a5+! 6 ♔h4 ♖a1! (not 6...♖a2? 7 ♖f8+! ♔e5 8 ♔g3! ♖a7 9 ♔g4! and wins) 7 ♖f8+ ♔e5! 8 ♖f3 (8 ♔h5 ♖h1+ 9 ♔g6 ♖g1+! 10 ♔f7 ♖f1+! 11 ♔e7 ♖a1 draws) ♖h1+! 9 ♔g5 ♔e6! (9...♖g1+? 10 ♔h5! and

the king can run to f7) 10 ♔g6 ♖g1+ and Black draws.

2) **2 ♖g2?** ♖a6+! 3 ♔g7 ♖a7+! 4 ♔g6 ♖a6+! 5 ♔h5 ♖a5+! 6 ♔h4 ♖a6! and after 7 ♖f2+ ♔e3! or 7 ♖g4+ ♔f3! White cannot save his pawn.

3) **2 ♖g1!** (threat ♖h1) ♖a6+ 3 ♔g7! ♖a7+ 4 ♔g6! ♖a6+ 5 ♔h5! ♖a5+ 6 ♔h4! ♖a2 (6...♖a6 7 ♖f1+) 7 ♖f1+ ♔e5 8 ♔h5 ♖h2+ 9 ♔g6! ♖g2+ 10 ♔f7 ♖h2 11 ♖f6 ♖h1 12 ♔g7 followed by ♖g6 and h7.

The reciprocal zugzwang of diagram 25 is also preserved if it is shifted down by a rank.



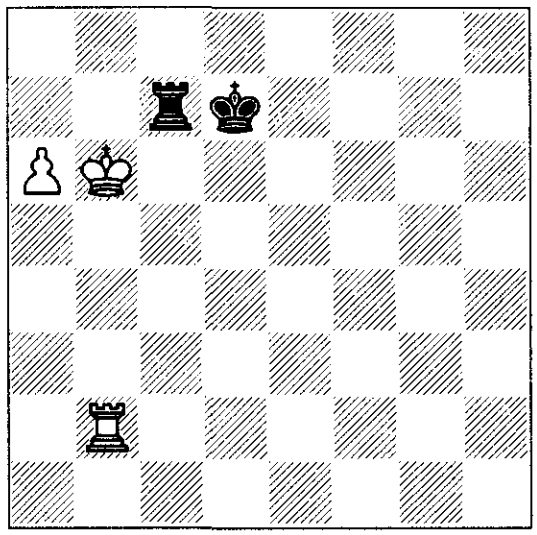
76 =/–

*Original*

**(76):** It is not necessary to give detailed analysis, because the play is exactly the same as in diagram 25, except that instead of leading to diagram 22 we end up with diagram 75. With Black to play the main line is 1...♖h7 2 ♖g6! ♔d4 3 ♔d6! ♔e4 4 ♔e6! ♔f4 5 ♔f6!. When White is to move 1 ♖e6 is the only try but Black draws by 1...♔d4! 2 ♔d6 ♖b7!.

It is worth mentioning that the study of diagram 26 is also correct if it is shifted down a rank (W♔a6, ♖f6, ♙h6 v B♔b4, ♖h7). The solution is exactly analogous.

The next two positions are linked.



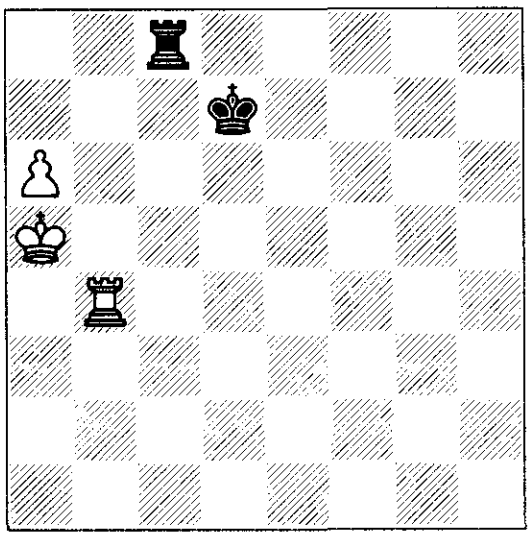
77 +/=

*Karstedt, 1896*
*Deutsches Wochenschach*

**(77):** White to play wins with 1 a7, so we take Black to play. The analysis runs 1...♖c6+! 2 ♔a5 (2 ♔b7 ♖c7+! 3 ♔b8 ♖c8+! 4 ♔a7 ♔c6 and 2 ♔b5 ♔c7! 3 a7 ♖b6+! draw) ♖c5+ (the simplest drawing line is 2...♔c7 3 a7 ♖c1, but this requires Black to defend ♖+♘ v ♖) 3 ♔b4 (3 ♔a4 ♖c1 4 ♔b5 ♔c7 draws) ♖c1 4 ♖a2 ♖b1+! 5 ♔c5 ♖c1+ with a draw.

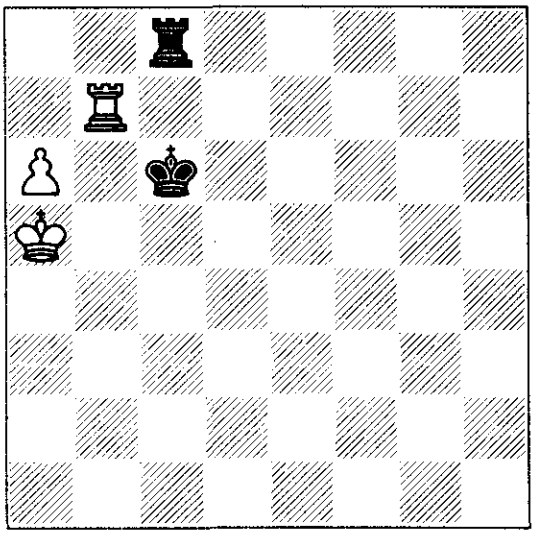
If we move White's rook to b1 or b3 the position remains a draw, but with the rook on b4 White wins by 1...♖c6+ 2 ♔b5 ♖c7 (2...♔c7 3 a7 ♖b6+ 4 ♔a5 wins, as does 2...♖c1 3 a7) 3 ♖a4 ♖a7 4 ♔b6.

**(78):** We take Black to play. Moving White's rook in Chéron's position



78 +/–

*Chéron, 1944*



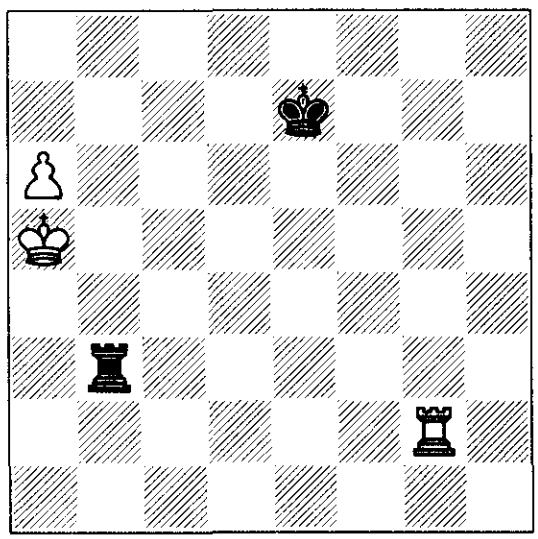
79 +/=

*ECE, 1985*

gives the same result as in Karstedt's above, namely that with the rook on b4 White wins, but with the rook on b1, b2, b3, b5 or b6 Black to move draws. Firstly with the rook on b4 White wins after 1...♖h8 (1...♖c5+ 2 ♔b6 ♖c6+ 3 ♔b5 wins as in Karstedt, while 1...♖a8 2 ♖h4 ♔c7 3 ♖h7+ ♔c6 4 a7 also wins for White) 2 a7 ♔c7 3 ♖h4 ♖g8 4 ♖h7+ ♔c6 5 ♔a6 followed by ♖b7-b8. With the white rook on b1, b2 or b3 Black draws by 1...♖c5+ as in Karstedt. With the white rook on b5 the simplest draw is by 1...♖c1 2 a7 ♔c7! 3 a8♘+ ♔c6 4 ♖b6+ (4 ♘b6 ♖c5) ♔c5 5 ♔a6 ♖a1+ 6 ♔b7 ♖xa8. Finally, with the white rook on b6, Black draws easily by 1...♖c5+ 2 ♔b4 ♖c1.

**(79):** White to play wins by 1 ♖h7 followed by 2 a7, while Black to play draws by 1...♖c7! (1...♖h8? 2 ♖b6+! ♔c7 3 a7! ♖h1 4 ♖a6! wins) 2 ♖b6+ (2 ♖b8 ♖h7 3 ♖c8+ ♖c7! draws) ♔c5 3 ♖h6 ♖g7 4 ♖h1 ♖c7! 5 ♖g1 ♔c6! 6 ♖g6+ ♔c5! and White cannot make progress (we also saw this draw in diagram 72).

We now consider a few practical examples.



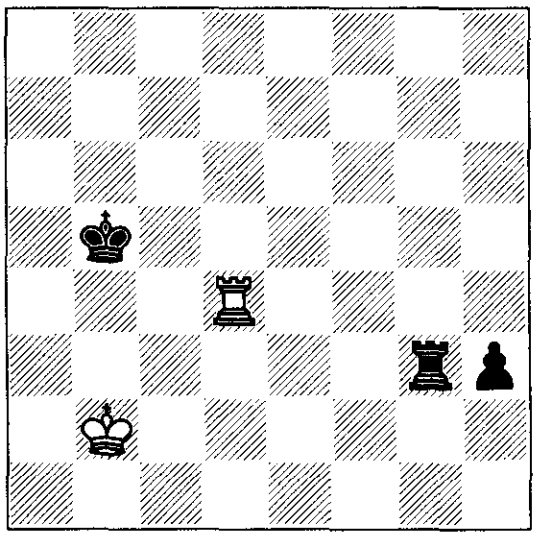
80 /–

**Fischer – Benko**

*USA Ch, 1959/60*

**(80):** 1...♖a3+ (1...♔d6 2 a7! ♖a3+ 3 ♔b6! ♖b3+ 4 ♔a6! and the king runs to d8, or 1...♔d7 2 a7! ♖a3+ 3 ♔b4 followed by ♖g8) 2 ♔b6! ♖b3+ 3 ♔c5 (3 ♔c6 was a slightly quicker

alternative, for example 3...♖c3+ 4 ♔b5 ♖a3 5 ♖b2 ♔d7 6 ♔b6 ♔c8 7 a7 ♖a1 8 ♖c2+ ♔d7 9 ♖c5 wins) ♖a3 4 a7 ♔e6 (4...♔d7 loses to 5 ♖g8, but 4...♔f6 is better, forcing White to find 5 ♔b6 ♖b3+ 6 ♔c7 ♖c3+ 7 ♔b8 ♖b3+ 8 ♔a8 and he is just in time with ♖g8-b8) 5 ♖g7 ♖a1 6 ♔c6 ♖a2 7 ♔b7 ♖b2+ 8 ♔c8 ♖a2 9 ♔b8 ♖b2+ 10 ♖b7 ♖h2 11 a8♕ ♖h8+ 12 ♔a7 1-0.



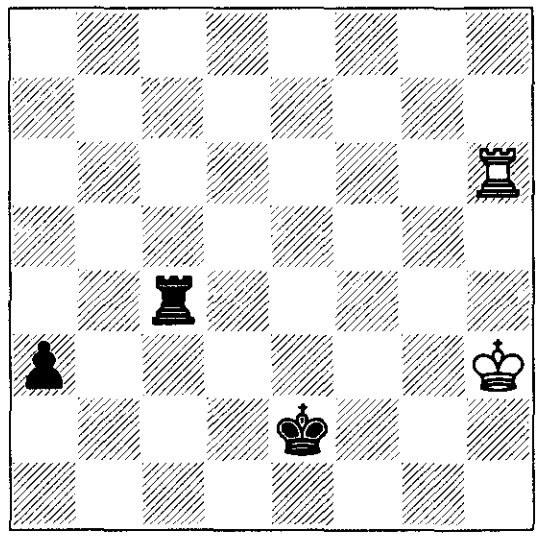
81 =/=

**Vyzhmanavin – Lerner**

*USSR Ch (Lvov), 1984*

**(81):** This typical practical position is completely drawn because White's rook can take up an active position behind Black's pawn. After 1 ♖h4 ♔c5 2 ♔c2 (the threat is 3 ♔d2 ♖a3 4 ♔e2 h2 5 ♔f2 and White rounds up the black pawn) ♖a3 (White failed to appreciate that this prevents ♔d2) 3 ♔d2?? (White's simplest draw is by 3 ♔b2 ♖g3 4 ♔c2, renewing the threat to play ♔d2) h2! (White's king is stranded in mid-board and he has no way to meet the threat of 4...♖a1) 4 ♔e2 ♖a1 0-1.

Equally bad play occurs in the next example:



82 –/

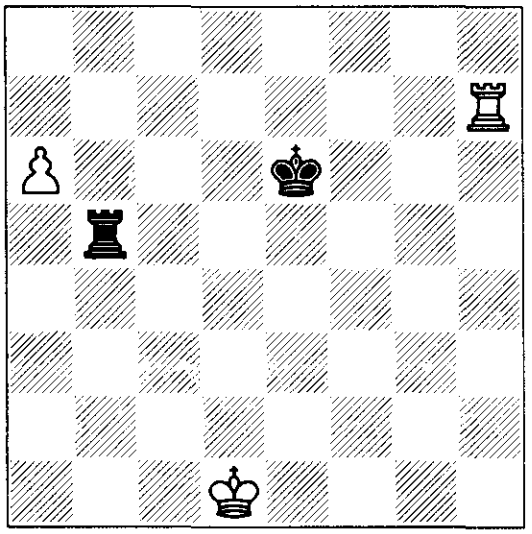
**Martinovsky – Shirazi**

*2nd Saint John Open, 1988*

**(82):** Black's king is close to his pawn, while White's is far away. The game continued 1 ♖a6 ♖c3+! 2 ♔g4 ♔d2 3 ♔f4 ♔c2 4 ♔e4 ♔b2 5 ♔d4 ♖c1?? (a really awful move by Black; after 5...♖b3 followed by 6...a2 the game is over) 6 ♖b6+! ♔a1 (6...♔c2 7 ♖c6+! draws after 7...♔d2 8 ♖h6 or 7...♔d1 8 ♖a6!) 7 ♔d3 a2 8 ♔d2?? (8 ♖h6 draws as in diagram 3) ♖b1! 9 ♖c6 ♔b2! 10 ♖b6+ ♔a3! 11 ♖a6+ ♔b3! 12 ♖b6+ ♔c4! 0-1.

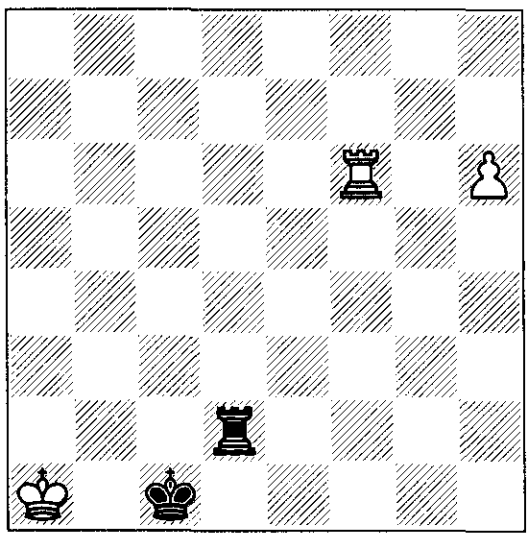
We finish with some tactical positions.

**(83):** Grigoriev gave a win starting with 1 a7 ♖b1+ 2 ♔c2! ♖a1 3 ♔b2!, but he overlooked that White can win without using his king by 1 ♖h6+ ♔d7/e7/f7 2 ♖h8, followed by a7, winning Black's rook. Black to play can draw with almost any move, for example 1...♖a5 or 1...♔d6.



83 +/=

*Grigoriev, 1952*

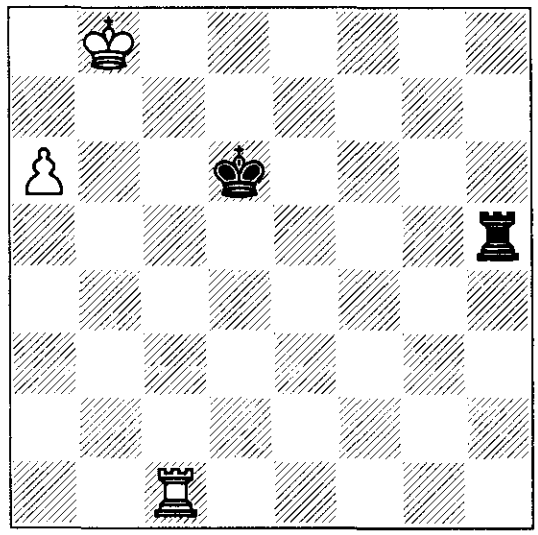


84 +/=

*Troitsky, 1924*
*500 Endspielstudien*

**(84):** White wins by 1 h7! and now either 1...♖h2 2 ♖f1+! followed by ♖f2+ or 1...♖d8 2 ♖c6+! followed by ♖d6+.

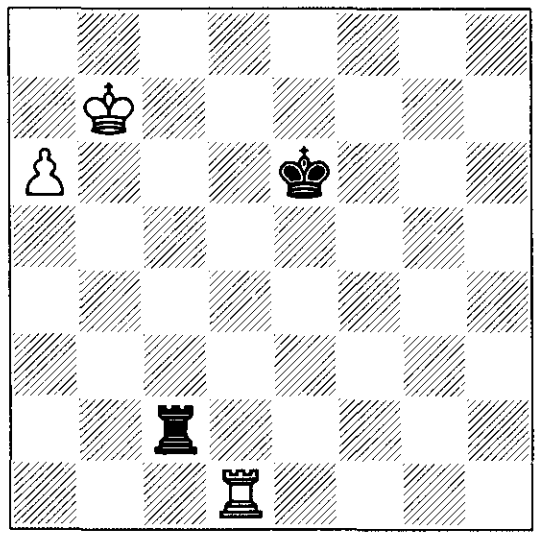
**(85):** Black can save himself by using a precise tactical idea: 1...♖b5+! 2 ♔c8 ♖a5! 3 ♖h1 (threatening 4 ♖h6+) ♖c5+! (not 3...♖a2? 4 ♖h7 and wins) 4 ♔d8 ♖g5! (4...♖f5? 5 ♖h6+! ♔c5 6 a7! wins) 5 ♖h6+ ♔c5! 6 a7 and now



85 /=

*Seyboth, 1899*

Black draws by 6...♖g7! as in diagram 29.



86 /=

*ECE, 1985*

**(86):** This is closely related to Seyboth's position. Black can draw by 1...♖b2+! 2 ♔c7 (retreating the king also doesn't work: 2 ♔c6 ♖c2+! 3 ♔b5 ♖b2+! 4 ♔c4 ♖a2! 5 ♖h1 ♔d7 6 a7 ♔c7 draws) ♖c2+! 3 ♔d8 ♖a2! 4 ♖h1 ♖d2+! (4...♔d5 5 ♖h6! ♔c5 6 ♔c7 wins) 5 ♔e8 and now *ECE* gives

the drawing line 5...♖g2 6 ♖h6+ ♔d5! 7 ♔d8 (7 a7 ♖g8+) ♖g7. There is an alternative route by 5...♔d6 6 ♖a1 (6 a7 ♖a2 or 6 ♖h7 ♔c6) ♔c7 7 a7 ♖d8+.

The ending of ♖+♙a6 v ♖ contains 10 positions of reciprocal zugzwang. These are diagrams 64, 66 (with two related positions), 67, 72, 73 (with one related position), 75 and 76.

**Practical tips:** The Vancura draw (diagram 34) is absolutely fundamental and it is impossible to play ♖+a♙ v ♖ correctly without knowing it. The Romanovsky positions with the rook in front of the pawn (diagrams 35-44) arise quite often in practice. They are sufficiently complex that unless one has studied them in advance, finding the right moves over the board would be very hard. Practical players should also give attention to diagrams 71, 77 and 78 as these tend to arise from a-pawn positions with the pawn further back.

## 1.3: Pawn on the fifth rank

We are starting to move away from the realms of theoretical analyses and into the field of practical play. Completely systematic exploration of this ending would take up too much space, so we give the most important positions from the practical point of view and leave the esoteric examples for future investigators.

Since Black draws easily if his king is in front of the pawn, it follows that Black's king must either be far away initially, or it must be cut off, usually by White's rook. We distinguish the following cases:

1.3.1: Black's king is cut off along a file 55
1.3.2: Black's king is cut off along a rank 58
1.3.3: White's rook is in front of the pawn 60
1.3.4: White's rook is behind the pawn 71
1.3.5: Other situations 73

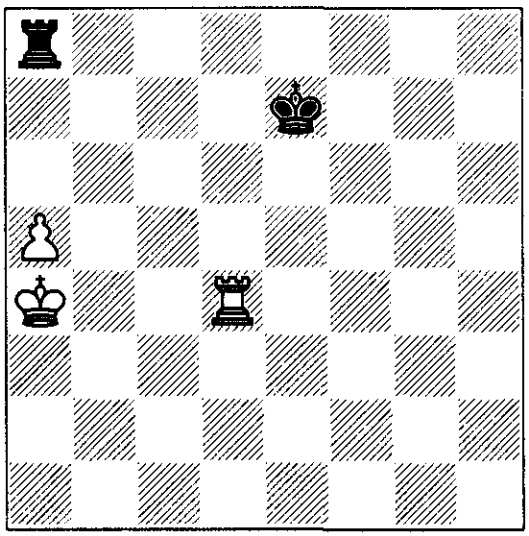
It should be emphasized that this classification is not precise, because positions of one type frequently change into positions of another type as play proceeds.

When Black's king is cut off along a file we must answer the question of how far away Black's king must be in order for White to have a guaranteed win. In addition, White may win certain special positions even when the black king is closer than this limit.

In section 1.3.3, we analyse positions which are analogous to those investigated by Romanovsky in section 1.2.2. While many of the results are fairly predictable, there are quite a few surprises.

### 1.3.1: Black's king is cut off along a file

We will fix White's pawn on a5, his king on a4 and Black's rook on a8. What happens when we vary the positions of White's rook and Black's king?



87 =/=

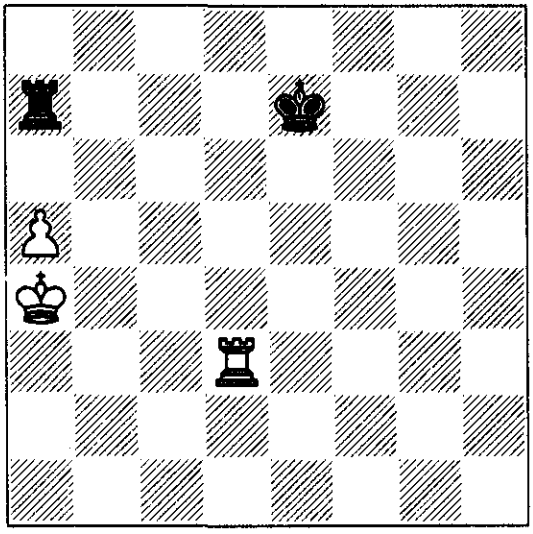
*Chéron, 1926*

**(87):** This shows that in general being cut off by three files is not enough to win. With Black to play 1...♖d8 is the simplest continuation (although 1...♔e8 also draws), since White has to move his rook away, allowing Black's king to approach. White to play continues 1 ♔b5 and now:

1) **1...♖b8+?** 2 ♔c6 ♖c8+ (2...♖a8 3 ♖a4 wins easily and 2...♖b1 3 a6! is similar to 2...♖c8+) 3 ♔b7 ♖c1 4 a6 ♖b1+ 5 ♔c6 ♖c1+ 6 ♔b5 ♖b1+ 7 ♔a5 ♖b8 8 a7 wins for White. Play is similar if White's rook starts on d3 (see the following diagram), but with the rook on d1 or d2 the king would have to retreat too far in order to let the rook interpose on the a-file and therefore in this case 1...♖b8+ would also lead to a draw.

2) **1...♖d8!** 2 ♖c4 (2 ♖a4 ♔d7 draws) ♖b8+! (2...♔d7? 3 a6! ♖b8+ 4 ♔a5! ♖a8 5 ♖h4 ♖g8 6 a7 ♔c7 7 ♖h7+ ♔c6 8 ♔a6 and ♖b7-b8 wins) 3 ♔a4 (now White cannot go to the c-file because Black can exchange rooks, while after 3 ♔a6 White's king is imprisoned) ♔d7 (or 3...♖a8, restoring the initial position) 4 a6 ♖b1 5 ♔a5 ♖a1+! 6 ♔b6 ♖b1+! draws. This drawing method works no matter where White's rook is on the d-file.

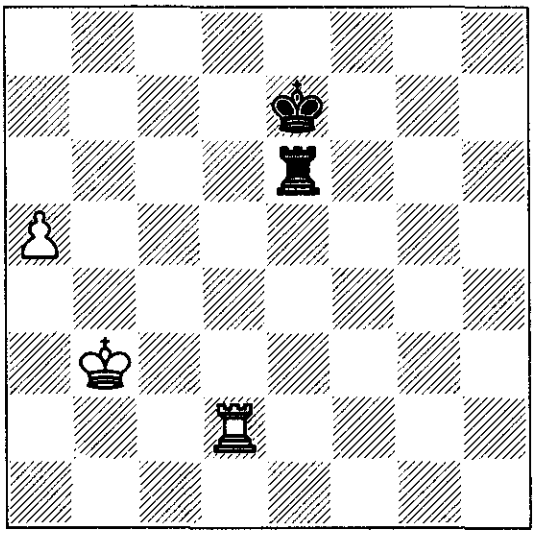
However, if Black's rook is not optimally placed on a8 then White has winning chances, as in the following example.



88 +/=

**(88):** White also wins if his rook is on d4, but contrary to *ECE*'s opinion the position is a draw if White's rook is on d1 or d2. The main line runs 1 ♔b5! ♖b7+ (1...♖d7 2 ♖a3 ♖d5+ 3 ♔b4 ♖d8 4 a6! ♖a8 5 a7 wins; the crucial difference when Black can play

1...♖a8-d8 is that 2 ♖a3 may be met by 2...♔d7 because the rook may move directly to a8) 2 ♔c6! ♖b1 3 a6! ♖c1+ 4 ♔b5! ♖b1+ 5 ♔a4! ♖b8 6 ♖a3 ♔d7 7 a7 and wins. With the white rook on d4, the winning line is similar and has already been given in the analysis of the previous diagram. The reason why the position is drawn with the rook on d1 or d2 was also mentioned above; in these cases (with the rook on a8) Black had a draw with 1...♖b8+ and 2...♖b1 (or 2...♖b2). The same method also works when Black's rook starts on a7.

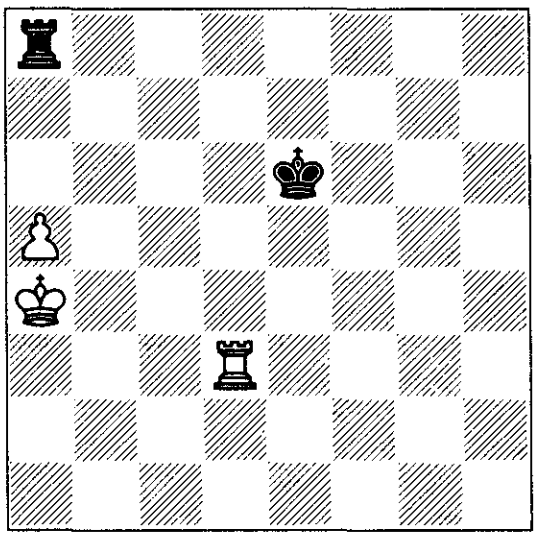


89 /=

**Dvoirys – Kovaliov**
*Simferopol, 1988*

**(89):** This position is drawn even with White to move, so Black should have had no trouble holding it. However, there is an unpleasant trap which Black fell into. The motif of offering the exchange of rooks is a standard one in such endings, but Black's move 1...♖d6? was in fact a losing blunder. After 2 ♖a2! Black found that he couldn't play his king to the d-file because it blocks ...♖d8 and allows White to win by 3 a6. White finished the game accurately: 2...♖a6 3 ♔b4 ♔d7 (too late!) 4 ♔b5! ♖a8 5 a6! ♔c7 6 ♖c2+! ♔d7 7 ♖h2 ♖b8+ 8 ♔a5! ♖b1 9 a7! ♖a1+ 10 ♔b6! ♖b1+ 11 ♔c5 ♖c1+ 12 ♔b4 ♖c8 13 ♖d2+ 1-0. Black could have reached a draw by 1...♖a6 2 ♔b4 ♖a8 3 ♔b5 ♖d8!, as in diagram 87.

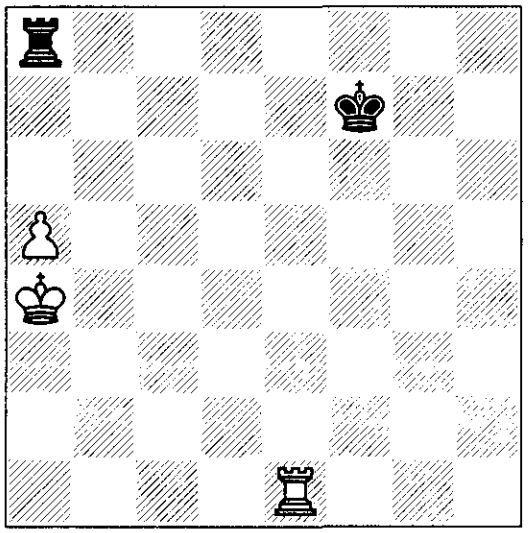
The results are very similar if the black king is on a slightly inferior square.



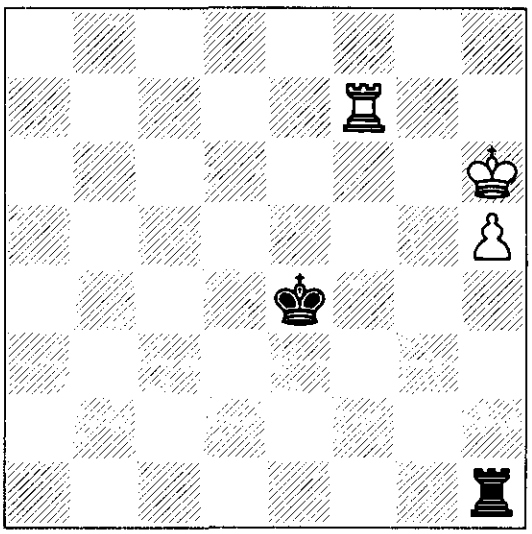
90 +/=

*Chéron, 1926*

**(90):** White also wins with the rook on d4, but with the rook on d1 or d2 the position is a draw. There is no need to give the analysis because the logic is exactly the same as before. After 1 ♔b5 Black is deprived of his ...♖d8 defence, so he has to fall back on 1...♖b8+ 2 ♔c6 ♖c8+ 3 ♔b7 ♖c1, but then 4 a6 wins precisely when the rook can interpose on a3 or a4. Otherwise Black can draw.



91 +/–



92 =/

**Cvetkov – Karaklaić**
*match Sofia-Belgrade, 1956*

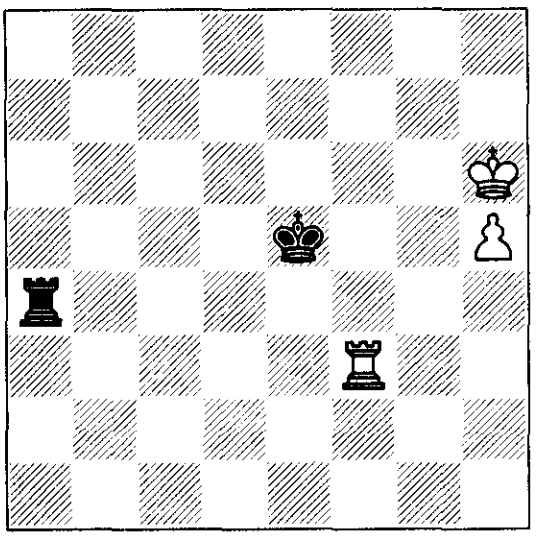
**(91):** The extra file makes all the difference. We take Black to play: 1...♔f6 (the king is too far away for ...♖e8) 2 ♔b5 ♖b8+ 3 ♔c6 ♖c8+ 4 ♔b7 ♖c2 5 ♖b1 (the simplest, although 5 a6 also wins by hiding the king on a8 and then playing the rook to b8) ♖e2 6 a6 ♖e7+ 7 ♔b6 ♖e6+ 8 ♔a5 ♖e5+ 9 ♖b5 ♖e7 10 ♖c5 followed by ♔b6 and a7, and White wins.

In the following example Black's rook is operating from behind the pawn. As we mentioned in the case of the pawn on the sixth, it tends to make little difference which rank the pawn is on, because White can always end up with the pawn on h7 and the king on h8. This position is a special case because of the poor black king position.

**(92):** If Black's king were on e7 and White's rook on f2 then the position would be a draw even with the king on h8 and pawn on h7. Therefore White must make an effort to prevent Black's king returning down the e-file. The game proceeded 1 ♔g6 (attempting to cut the king off along a rank leads to nothing after 1 ♖f6 ♔e5 2 ♖a6 ♔f5) ♖g1+! (1...♔e5? 2 ♖f5+! wins after 2...♔e6 3 ♖g5! ♖f1 4 h6! ♖f6+ 5 ♔g7! ♖f7+ 6 ♔g8! or 2...♔e4 3 ♖g5 ♖a1 4 h6 ♖a6+ 5 ♔h5! ♖a7 6 ♖g7) 2 ♔f6 ♖f1+! (not 2...♖h1? 3 ♖e7+! ♔f4 4 ♖e5! ♖h2 5 ♖f5+! ♔g4 6 ♔g6 ♖h1 7 ♖g5+ followed by h6 and wins) 3 ♔e6 and now:

1) **3...♖h1?** (the game continuation) 4 ♖f5! (with the plan of ♔f6-g6) ♖a1 5 ♔f6! ♖a8 (or 5...♖a6+ 6 ♔g5! ♖a1 7 ♔g6) 6 ♖e5+ ♔f4 7 h6 ♖h8 8 ♖h5! ♖a8 9 h7 1-0.

2) **3...♖a1** 4 ♖f6 (4 ♖f2 ♖a6+ 5 ♔f7 ♖h6! 6 ♖h2 ♔f5 7 ♔g7 ♖a6 draws) ♖a7 5 h6 (5 ♖f1 ♖a6+ followed by ...♖h6) ♖b7 (but not the tempting 5...♖h7? 6 ♖g6! ♔f4 7 ♔f6! reaching the reciprocal zugzwang of diagram 75 with Black to move) 6 ♖g6 ♔f4! 7 ♔f6 and now Black may draw by 7...♖h7, but 7...♖b6+ is even simpler.



93 +/

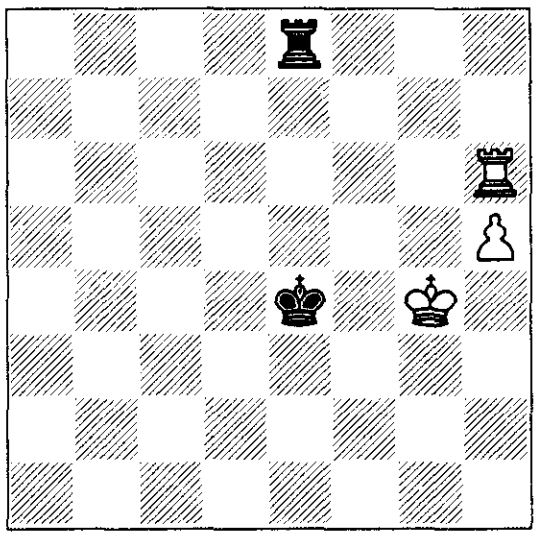
**Chigorin – Salwe**
*Carlsbad, 1907*

**(93):** This resembles the previous diagram, but Black is handicapped by the miserable position of his rook. There are two possibilities for White, since he may either advance or retreat with his king. The right choice is not obvious:

1) **1 ♔g7?** (the game continuation) ♖g4+! (1...♔e6? 2 ♖f6+! followed by h6 wins and Black cannot wait as 2 h6 is a threat) 2 ♔f7 ♖h4 3 ♖a3 (threat 4 ♖a6) ♖f4+! (not 3...♔f5? 4 ♖a5+! ♔g4 5 ♔g6! with an easy win) 4 ♔e7 ♔f5 (*ECE* gives this as losing, but it is actually the simplest draw) 5 ♖a5+ ♔g4! 6 h6 ♖f1 7 ♖a6 ♔g5! followed by ...♖h1 winning the pawn.

2) **1 ♔g5!** (the correct method, which exploits Black's rook position by denying him a check on the g-file; if Black's rook had started on a1 or a2 the position would be a draw) ♖a1 (or 1...♔e6 2 h6!) 2 h6 ♖g1+ 3 ♔h5! ♖h1+ 4 ♔g6! ♖g1+ 5 ♔f7! ♖h1 6 ♖f6 and wins.

## 1.3.2 Black's king is cut off along a rank



94 +/=

**Najdorf – Trifunović**
*Opatja match (5), 1949*

**(94):** This is a typical position with Black's king cut off along a rank. We first of all consider the situation with White to play. He can win by 1 ♖g6 (1 ♖a6 also wins, as we shall see below) ♖f8 (other moves are also met by h6) 2 h6 (there is an immediate threat of h7) ♖f1 (2...♖f4+ 3 ♔h5) 3 ♖e6+ (White now switches to cutting off Black's king along a file) ♔d5 4 ♖e3 (4 h7 also wins, but White might prefer to avoid having to play ♕ v ♖) ♖g1+ 5 ♖g3 ♖h1 6 ♖h3 and wins. Now move the black rook from e8 to e7. What is the result? Here is the analysis:

1) **1 ♖g6?** and now:

1a) **1...♖f7?** 2 ♖e6+! (2 h6? ♔e5! draws because 3 ♖g7 may be met by ...♔f6) ♔d5 3 ♖e3 ♔d4 (3...♖f1 4 h6 and the rook interposes) 4 ♖h3 followed by h6 and ♔g5 with an easy win.

1b) **1...♔e5!** 2 ♔g5 (2 h6 is also met by 2...♖f7!) ♖f7! 3 ♖g8 ♖f5+! 4 ♔g6 ♖f6+! 5 ♔g7 ♔f5! 6 h6 ♖g6+! 7 ♔h7 ♖a6 draws.

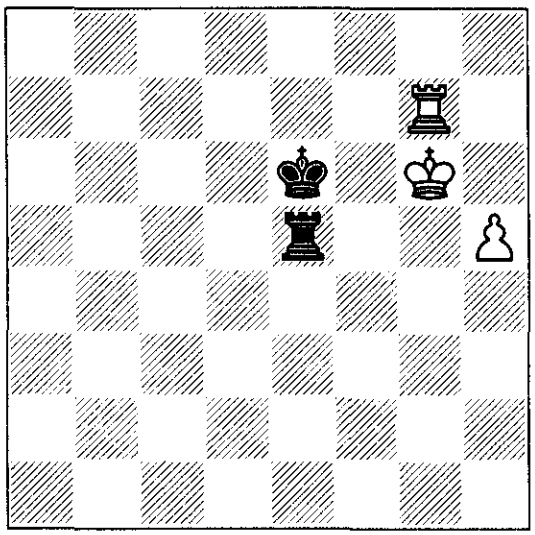
2) **1 ♖a6** ♖g7+ (1...♔e5 2 h6 ♖f7 3 ♔g5 wins easily when the rook is not blocking g6) 2 ♖g6! ♖f7 and White wins as in line 1a.

The method with 1 ♖a6 also works when Black's rook is on e8, but 1 ♖g6 is quicker in this case.

In the game Black was to move and the extra tempo enabled him to set up a defence: 1...♔e5! (not 1...♖e7? 2 ♖a6 as above, while 1...♖f8 2 ♖e6+ wins) 2 ♔g5 ♖a8 (now there is no check on e6, so Black can move his rook away from e8) 3 ♖b6 ♖g8+! (4 h6 was a threat and switching the rook to the other side loses after 3...♖a1? 4 ♔g6! ♖g1+ 5 ♔f7! ♖f1+ 6 ♔g7 and so on) 4 ♖g6 (4 ♔h6 ♔f5 5 ♔h7 ♖g1 6 h6 ♖g2 is a draw after 7 ♔h8 ♖g6 or 7 ♖b8 ♔f6 8 ♖f8+ ♔e7 9 ♖g8 ♖h2) ♖f8! (the same defensive idea as in line 1b above) 5 ♖g7 (5 h6 ♖f5+!) ♔e6 6 h6 ♖f1 7 ♔g6 ♖g1+ 8 ♔h7 ♖h1 9 ♖g2 ♔f7 10 ♖a2 ♖f1 ½-½.

This analysis shows two important defensive ideas for Black. Firstly, lateral checks from a rook on the f-file can be very awkward and secondly a check forcing White to interpose his rook can leave the rook on a bad square blocking the king.

**(95):** This position would normally be a draw, but here Black's rook is on just about the worst possible square. If the rook were on d5 (or any other square on the fifth rank) Black would draw by meeting 1 h6, 1 ♖g8 or 1 ♖a7 with 1...♖d1. The game continued 1 ♖g8! (preventing ...♖e1; 1 h6? and 1 ♖a7? both allow 1...♖e1 with a draw) ♖f5 (1...♔e7 2 h6 ♖e6+ 3 ♔g7 wins) 2 h6 (*ECE* incorrectly gives this move as leading to a draw, but it is true that White had a simpler win by 2 ♖e8+ ♔d7 3 ♖e4 ♖f1 4 h6 ♖g1+ 5 ♔h5 and the pawn promotes) ♖f6+ 3 ♔g5 (the game finished 3 ♔g7 ♖f7+ 4 ♔h8? ♖f1 5 ♖g7 ♖a1 6 ♔h7 ♔f6 ½-½) ♖f5+ 4 ♔g4! ♖f7 (4...♖f1 5 h7) 5 ♖a8 (*ECE* only gives 5 ♖g6+? which does lead to a draw after 5...♔e5! 6 ♖a6 ♖f1) ♔f6 (otherwise ♔g5 wins) 6 ♖a6+! ♔e5 (6...♔e7 7 h7) 7 ♔g5 with an easy win.

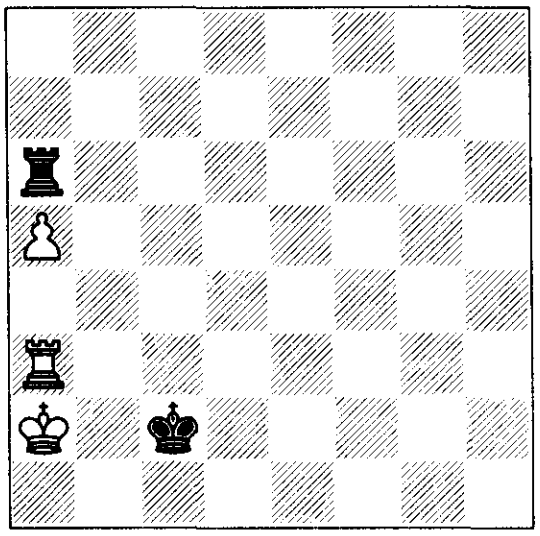


95 +/

**Ksieski – Adamski**
*Polish Ch, 1979*

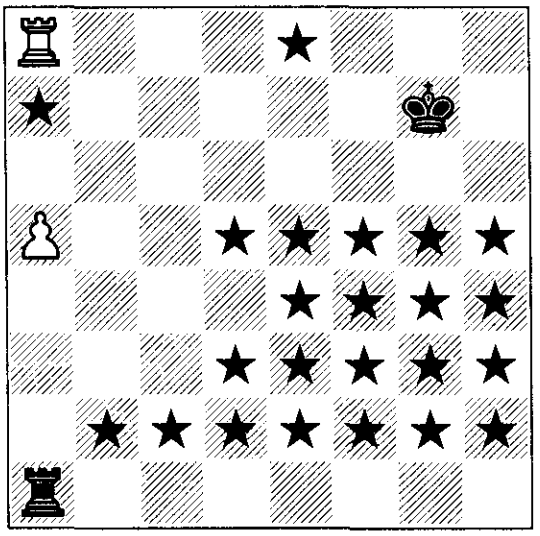
We finish this section with a position which is analogous to diagrams 72 and 73.

**(96):** If Black to play moves his king then White's king escapes and advances to b5. Therefore he must try 1...♖a8 2 a6! ♖a7, but 3 ♖a5 ♔c3 4 ♖a4 leads to diagram 72 with Black to



96 =/–

*Original*



97 /=

*Original*

play. With White to move 1 ♔a1 (or 1 ♖a4 ♔c3 2 ♔a3 ♖h6 3 ♖g4 ♖f6 4 ♔a4 ♖h6 with an easy draw) ♖a8! (1...♔c1? 2 ♖a2! ♖a8 3 a6! ♖a7 4 ♖a3 ♔c2 5 ♔a2! wins, as does 1...♖h6? 2 a6! ♖b6 3 ♖a5) 2 a6 ♖b8! 3 ♖a5 ♔b3 leads to a simple draw.

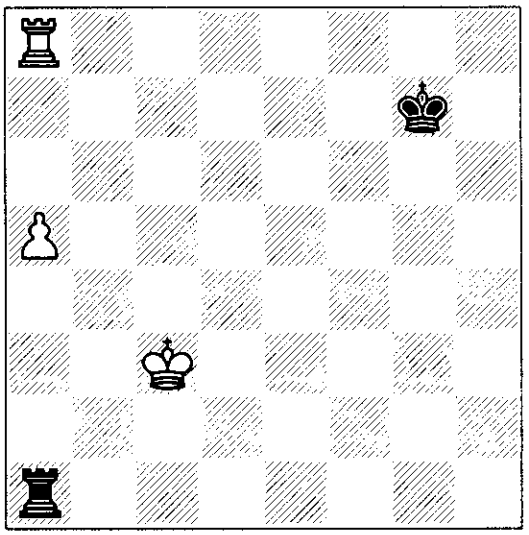
### 1.3.3: White's rook is in front of the pawn

Once again this proves to be the most interesting possibility. Let us suppose that White's rook is on a8 and his pawn is on a5. White can play a6 at any moment and reach section 1.2.2. However, there are some cases in which White can win even though the immediate a6 leads to a draw. The same general principles hold as in section 1.2.2. Black should try to attack White's pawn from the side, and a position with Black's king on g7 and rook on f5 is always a draw with Black to play (we again call this the 'Vancura draw').

**(97):** With Black to play where must the white king be in order to draw? The answer is given in the above diagram. With White's king on one of the starred squares Black to play draws; otherwise he loses. Not surprisingly the drawing zone is larger than in the case of the pawn on a6, but there are two surprising features. Firstly W♔d4 is a win with Black to play but W♔d5 is not. The second surprise is that W♔e6 is a win, even though it was a draw with the pawn on the sixth. The reason in both cases is that it is bad for White's king to be on the same rank as his pawn, because this often prevents White from moving his rook along the eighth rank.

We consider the following five situations in detail: W♔c3, d4, d5, e6 and e8.

**(98):** We assume that Black is to play. White threatens a6, since the king is out of the Romanovsky drawing zone, so Black must move his rook. There are two lines:



98 +/–

*Original*

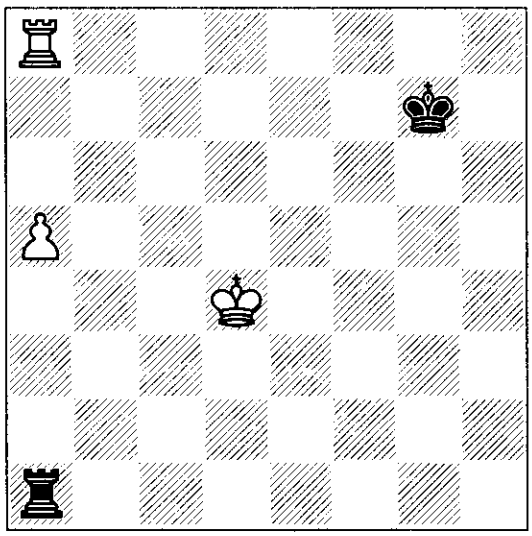
1) **1...♖e1** 2 ♔b4 (2 ♖b8 and 2 ♖d8 don't help, as after 2...♖a1 White must return to a8 if he wants to win; the move played threatens ♖c8) and now:

1a) **2...♔f6** 3 a6 (3 ♖c8? fails to 3...♔e7 and Black's king is sufficiently near to draw; this shows a big difference between having the pawn on the fifth and the sixth, because in the former case Black's king isn't necessarily locked in the top right corner) ♖e4+ (with the king badly placed on f6 Black does not have a Vancura draw) 4 ♔c3 ♖a4 5 ♔b3 ♖a1 6 ♔b4 reaching a Romanovsky win.

1b) **2...♖e4+** 3 ♔c5 ♖e5+ 4 ♔b6! (not 4 ♔d6? ♖f5 with a Vancura draw) ♖e6+ 5 ♔c7! ♖e7+ (5...♖e5 6 a6 ♖e6 7 a7! wins) 6 ♔d6! ♖e1 (Black cannot attack the pawn so White frees his rook) 7 ♖b8 ♖a1 8 ♖b5 and wins.

2) **1...♖f1** (now 2 ♔b4? ♖f4+! is a Vancura draw and 2 ♖a7+ ♔f8 is a waste of time because White can only win by playing ♖a8+ again) 2 ♖e8! (White's plan is to cut Black's king off along a file; 2 ♖d8? ♖a1! 3 ♔b4 ♔f7! is drawn because Black's king gets one file closer) ♖a1 (2...♖f3+ 3 ♔b4 ♖f4+ 4 ♔b5 ♖f5+ 5 ♔b6 ♖f6+ 6 ♔b7 ♖f7+ 7 ♔b8 ♖f6 8 ♖c8 followed by ♔b7 wins) 3 ♔b4! ♖b1+ (3...♔f7 4 ♖e3 followed by ♖a3 wins, but with the black king a file closer this would be a draw) 4 ♔c5! ♖c1+ 5 ♔b6! ♖b1+ 6 ♔a7! ♔f7 7 ♖b8 ♖c1 8 a6 ♔e7 9 ♖b4 ♔d7 (9...♔d6 10 ♔b8) 10 ♔b6 wins as in diagram 77.

3) **1...♖a4** 2 a6 is a Romanovsky win.

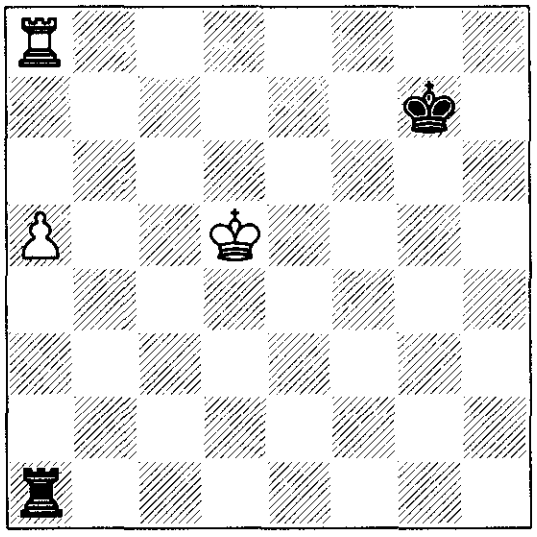


99 +/–

*Original*

**(99):** This position is significantly different from the preceding one because White cannot immediately support the a-pawn with his king. Play continues 1...♖c1 (after 1...♖f1 2 ♖b8 ♖f5 3 a6! ♖a5 4 ♖a8! we have a Romanovsky win) 2 ♖b8! (after 2 ♖e8 ♔f7 3 ♖e5? Black can draw by 3...♖a1 4 ♔c4 ♔f6! and the king approaches; in fact White can still win by 3 ♖a8!, when Black has nothing better than to

return to g7) ♖a1 (2...♔f7 3 a6! ♖a1 4 ♖a8! is a familiar win) 3 ♖b5! (this is the big difference with the king on d4 – White can reach b6 very quickly) ♔f7 4 ♔c5! ♔e6 5 ♔b6! ♔d7 6 a6! (6 ♔b7? ♖c1! draws) and White wins.



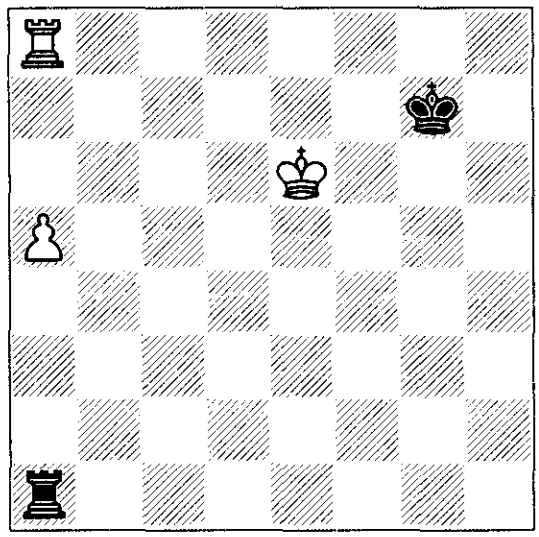
100 +/=

*Original*

**(100):** White to play wins with 1 a6, so we take Black to play. It might appear that this is even better for White than the previous position, but in fact Black can draw. 1...♖f1! 2 ♖a7+ (the key point is that with the king on d5 White cannot play 2 ♖b8 owing to 2...♖f5+) and now:

1) **2...♔f8?** 3 ♔e6! (3 a6? ♖f6!) ♖b1 4 ♖a8+! ♔g7 5 ♖d8! (not 5 ♖c8? ♖b5! drawing) ♖e1+ (5...♖a1 6 ♖d5) 6 ♔d7 ♖a1 7 ♖a8! and White's king is in the winning zone.

2) **2...♔g6!** 3 ♖e7 (other moves allow a simple Vancura draw) ♖a1! (after 3...♔f6? White wins, but accurate play is required: 4 ♖e6+! ♔f7 5 ♖e5! ♔f6 6 ♔d6! ♖d1+ 7 ♖d5! ♖a1 8 ♖b5 with ♔c6-b7 to come) 4 ♖e6+ ♔f7! (not 4...♔f5? 5 ♖e5+ and 6 ♔d6) 5 ♖a6 ♔e7 draws.

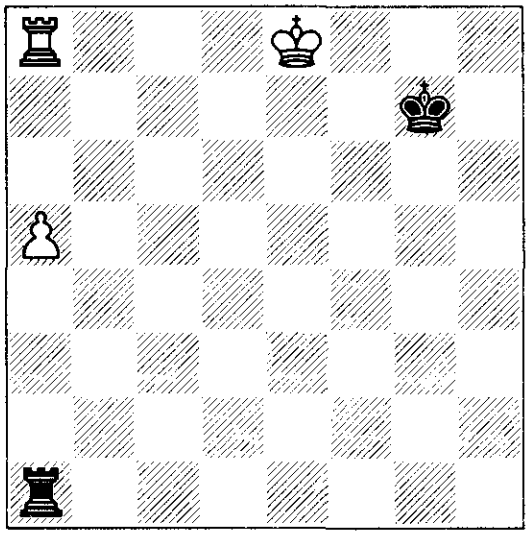


101 +/–

*Original*

**(101):** After 1...♖f1 (1...♖b1 is met by 2 ♖d8! transposing to line 1 in the previous diagram) 2 ♖b8 (2 ♖d8? fails to 2...♖f6+ 3 ♔e7 ♖f5 4 a6 ♖f7+! 5 ♔e8 ♖f8+! 6 ♔d7 ♖f6! with a Vancura draw) ♖f6+ 3 ♔e7! (3 ♔d7? ♖f5! 4 a6 ♖f6!) ♖f5 (3...♖f7+ 4 ♔d8! ♔f6 5 a6! ♔e5 6 ♖b7! wins) 4 a6! and now Black cannot play 4...♖f6 because of 5 ♖g8+, so he has to play 4...♖f7+ 5 ♔d8!, when Black loses just as in the last bracket.

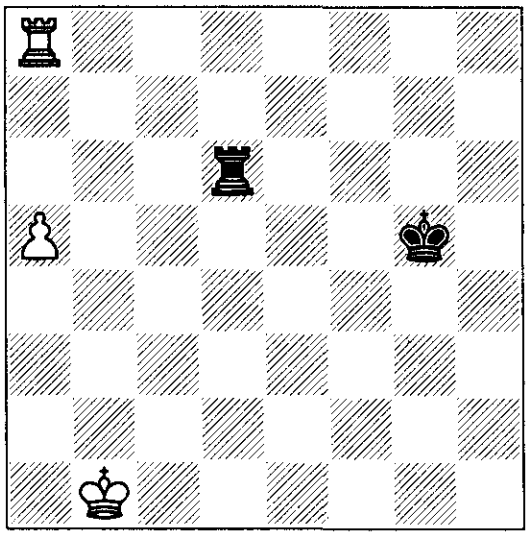
**(102):** In this exceptional position Black draws by continuing actively: 1...♔f6! (1...♖e1+? 2 ♔d7! wins after 2...♖f1 3 ♖e8 or 2...♖e5 3 a6!) 2 ♔d7 (2 a6 ♔e6) ♔e5! 3 ♖h8 (3 ♔c6 ♖c1+! draws, but not 3...♔d4? 4 ♖d8+! ♔c4 5 ♖d5! when White wins) ♖d1+! 4 ♔e7 ♖g1! (playing for checks from the side) 5 ♖h5+ ♔d4! 6 a6 ♖g7+ 7 ♔d8 ♔c4 8 ♔c8 ♔b4! 9 ♖d5 ♖a7! and wins the pawn.



102 +/=

*Original*

If Black's king is not on the safe square g7 then play can be very complicated. We give one example.



103 +/=

*Original*

**(103):** With White to play, 1 a6 leaves Black in a hopeless position because he doesn't have time to bring his king back to safety. Now suppose that Black is to play. He has the choice between 1...♔f6, 1...♔g6 and 1...♔h6 but only one of these draws. Which one?

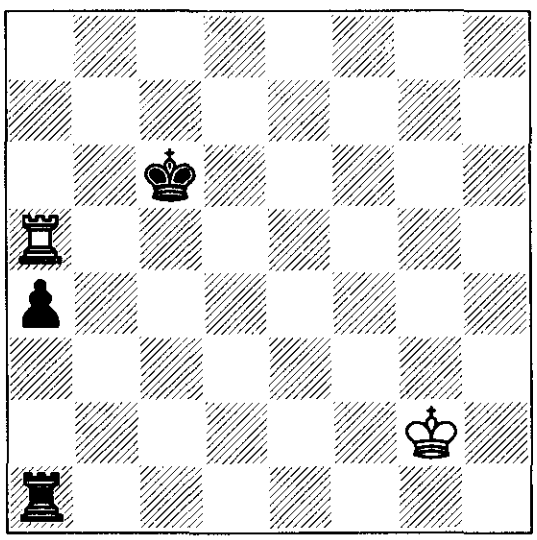
1) **1...♔g6!** 2 ♔b2 (2 a6 ♔g7 is a Vancura draw) ♖f6! (it is more important for Black to give himself maximum checking distance than to play his king into safety: after 2...♔g7? 3 ♔b3 ♖f6 4 ♖e8 ♖f3+ White hides his king on b8 and then meets ...♖f6 by ♖c8 followed by ♔b7) 3 ♔b3 (3 ♖b8 ♔f7! threatens ...♔e7 and so forces White back to a8; the text-move brings the white king close enough to defend the pawn, so he is threatening ♖e8) ♖f3+! (not 3...♖f5? 4 a6!) 4 ♔c4 ♖f4+! 5 ♔c5 ♖f5+! 6 ♔b6 (6 ♔d4 ♔g7) ♖f6+! 7 ♔c7 ♖f7+! 8 ♔d6 ♖f6+! 9 ♔e5 ♖f5+! 10 ♔e4 ♖b5! (10...♖c5? 11 ♔d4! ♖f5 12 a6! ♔g7 13 ♖a7+! ♔g6 14 ♖b7 wins) 11 ♔d4 (11 a6 ♔g7 12 ♖a7+ ♔g6! 13 ♖b7 ♖a5! 14 a7 ♔f6! and Black's king arrives on c6 just in time; this explains why 10...♖c5?, which gives White an extra tempo, is a loss) ♔g7! (11...♖f5 12 a6!, as before) 12 ♔c4 ♖f5! (not 12...♖e5? 13 ♔b4! ♖e4+ 14 ♔c5 ♖e5+ 15 ♔b6 ♖e6+ 16 ♔c7 ♖e7+ 17 ♔d6 and wins) 13 ♔b4 ♖f4+! and now that Black's king is on g7, he is in no danger at all.

2) **1...♔f6?** 2 ♔b2 ♖e6 (Black cannot play to the f-file) 3 ♔c3 ♖e3+ 4 ♔d4 ♖e6 (the same defence as above, but Black's rook is too close to the a-pawn) 5 ♖a7! (White would like to play 5 ♖b8 intending ♖b6, but this allows 5...♔e7! drawing, so White first cuts off Black's king) ♖c6 6 ♔d5! (6 ♖b7? ♔e6!) ♖e6 (Black prevents ♖b7, but it doesn't help) 7 a6 ♖e5+ 8 ♔d4 ♖a5 9 ♖a8 leading to a Romanovsky win.

3) **1...♔h6?** 2 ♔b2 ♖f6 3 ♖b8 (although Black has enough checking distance, he loses because he has to play his king to f7 in order to force White to play ♖a8; this costs him a crucial tempo) ♔g7 4 ♔b3 ♔f7 (threatening 5...♔e7) 5 ♖a8! (...♔e7 is prevented because of the reply a6; now White threatens to win by marching his king to b7 because Black has no check on f7) ♔g7 (clearing f7, but now White switches plans again) 6 ♖e8 (6 ♔b4? ♖f4+! with a Vancura draw) ♖f3+ 7 ♔b4 heading for b8 and winning, just as in line 1, note to Black's 2nd move.

This position is admittedly quite complex, but a careful analysis reveals many of the secrets of ♖a8+♙a5 v ♖ endings.

Here are a couple of practical examples based on this type of position.



104 =/+

**Inkiov – Alburt**

*Thessaloniki Olympiad, 1984*

**(104):** Black to move wins by 1...a3 2 ♖h5 ♖a2+ 3 ♔f3 ♔b6, exactly as in diagram 41, line 4. In the game White was to move and it is clear that he cannot afford to wait.

**1 ♖f5!**

The only move to avoid defeat. White threatens to reach the Vancura draw by attacking Black's pawn from the side, but why is f5 better than e5, g5 or h5? The answer is that only 1 ♖f5 carries the immediate threat of a Vancura draw by 2 ♖f4. After other moves Black can afford to spend a tempo on ...♔b6, threatening to move his rook. Here are the variations:

1) **1 ♖e5?** ♔b6! (the threat is now 2...♖b1 freeing the rook; not 1...♖b1? immediately because of 2 ♖a5! drawing) 2 ♖e4 (2 ♖e8 and 2 ♖e3 are also met by 2...♔b5, with a parallel continuation) ♔b5 3 ♖e5+ ♔c4 and wins as in line 1b of diagram 98. In this case White's rook is too near Black's king.

2) **1 ♖g5?** (1 ♖h5? is similar) ♔b6! and White cannot prevent Black's rook move because 2 ♖g4 ♔b5 3 ♖g5+ ♔c4 4 ♖g4+ ♔b3 leads to a Black win. In this line White's king obstructs his rook.

**1 ... ♖d1**

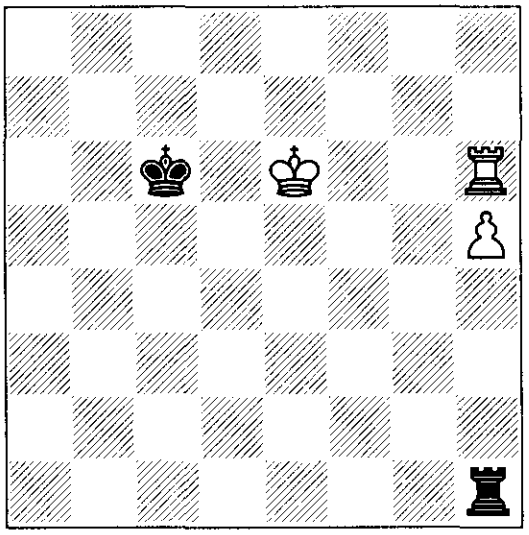
1...♔b6 2 ♖f4 and 1...a3 2 ♖f3 are immediate Vancura draws, so Black has to try this.

**2 ♖a5!**

In the above lines Black played ...♔b6 specifically in order to prevent

this move, so here it is the only logical choice.

**2...♖d4** (the only way to avoid a repetition, but White's king can approach) **3 ♔f3 ♔b6 4 ♖a8! ♔b5 5 ♔e2 ♔b4 6 ♖b8+ ♔c3 7 ♖c8+ ♔b2 8 ♖b8+ ♔a2 9 ♖b7 ½-½.**



105 +/

**Tarjan – P.Nikolić**
*Vršac 1983*

**(105):** White continued with an inaccuracy.

**1 ♖h8**

This maintains the win but wastes eight moves, as when Black starts checking White must retreat his king. A simpler method was 1 ♖h7 ♖e1+ 2 ♔f7 ♖f1+ 3 ♔e8 ♖e1+ (3...♖h1 and 3...♖f5 are both met by 4 h6) 4 ♖e7 ♖h1 5 ♖e6+! ♔d5 6 ♖a6 ♖e1+ (or else h6) 7 ♔f7 ♖f1+ 8 ♖f6 ♖h1 9 h6 with an easy win.

**1 ... ♖e1+**

After 1...♔c7 White executes his threat of 2 h6 ♖e1+ 3 ♔f7 hiding on h7.

**2 ♔f5 ♖f1+**
**3 ♔g4**

Now, on the other hand, 3 ♔g6 ♖g1+ 4 ♔h7? is too slow and allows Black to draw by one tempo with 4...♔d7 5 ♖g8 ♖h1 6 h6 ♔e7.

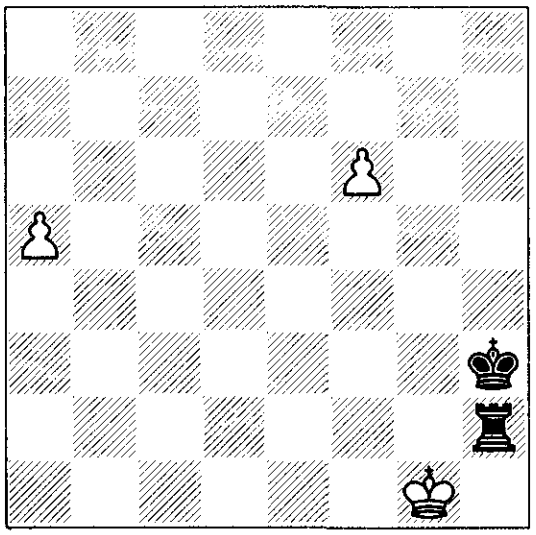
**3 ... ♖g1+**
**4 ♔f3 ♔b7**

4...♖f1+ 5 ♔g3 ♖g1+ 6 ♔f2 ♖g5 (6...♖h1 and 6...♖a1 are also met by 7 h6) 7 h6 ♖h5 8 ♔g3 is a Romanovsky win, as is 4...♔c7 5 h6 (since 5...♖g6 loses to 6 h7). The move played prevents the immediate 5 h6? because 5...♖g6! really does draw.

**5 ♔f4** (Black's king is one square further away, so now White can return to the plan of hiding on h7) **♖f1+** (5...♔c6 6 h6) **6 ♔g5 ♖g1+** (6...♖d1 is met by 7 ♖f8) **7 ♔f6 ♖f1+ 8 ♔g7 ♔c7** (8...♖g1+ 9 ♔h7 comes to the same thing) **9 h6 ♖g1+ 10 ♔h7 ♔d7 11 ♖g8! ♖f1 12 ♖g4** (we have seen this before) **♔e7 13 ♔g6 ♖f6+ 14 ♔g5 ♔f7 15 h7! ♖g6+ 16 ♔h5! ♖xg4 17 h8♕ ♖g7** (Black could have made this ending considerably more painful for White by playing 17...♖c4, when it takes White 24 moves of perfect play to win the rook!) **18 ♕h6 ♔g8 19 ♕d6 ♖h7+ 20 ♔g6 ♖g7+ 21 ♔f6 ♖f7+ 22 ♔e6 ♖b7 1-0** since it is now quite easy to win by 23 ♕d8+ ♔g7 24 ♕d4+

♔g8 25 ♔f6 ♖g7 26 ♕d8+ ♔h7 27 ♕e8 with a zugzwang which may be found in any endgame book.

We now consider a few positions in which Black's king is not in the g7-corner.



106 +/

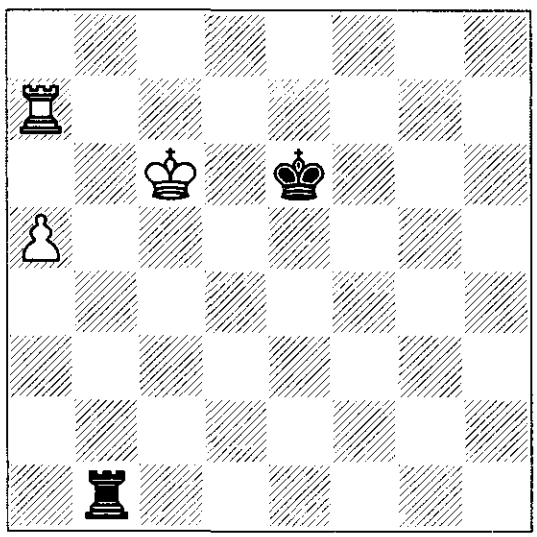
*Healey, 1880*
*Shakhmaty Listok*

**(106):** This doesn't look much like ♖+♙ v ♖ but after 1 f7 ♖g2+ 2 ♔f1 ♖g4! 3 f8♖! (3 f8♕ ♖f4+ 4 ♕xf4 stalemate) we are in familiar territory again. Black may play:

1) **3...♔g3** 4 ♔e2! (4 a6? ♖a4! 5 ♖a8 ♔f3! 6 ♔e1 ♔e3! 7 ♔d1 ♔d3! 8 ♔c1 ♔c3! 9 ♔b1 ♖b4+ draws) ♖a4 5 ♖a8 ♖g4 (we look at Black's attempt to attack the pawn from the side) 6 a6 ♖g6 7 ♔e3 ♔g4 8 ♔d4 and White wins as in line 2 of diagram 63.

2) **3...♖g6** 4 ♔e2 (or 4 ♖f3+ ♔g4 5 ♔e2, but not 5 ♖a3? ♔f5! drawing) ♔g4 (4...♖a6 5 ♖f3+ ♔g4 6 ♖a3! ♔f5 7 ♔d3! ♔e5 8 ♔c4! ♔d6 9 ♔b5! ♖a8 10 a6! wins) 5 ♖f1 ♖a6 6 ♖a1! and wins just as after 4...♖a6.

3) **3...♖a4** 4 ♖a8! ♔g4 (with this move, Black prevents 5 a6? because 5...♔f3! draws just as in line 1, so Black gets the tempo he needs to bring his king into the safe zone) 5 ♔e2 ♔f5 6 a6! ♔f6 7 ♔d3 ♔g7 (until the king is in the safe zone, Black cannot move his rook off the a-file) 8 ♔c3 and White wins as in line 4 of diagram 41.



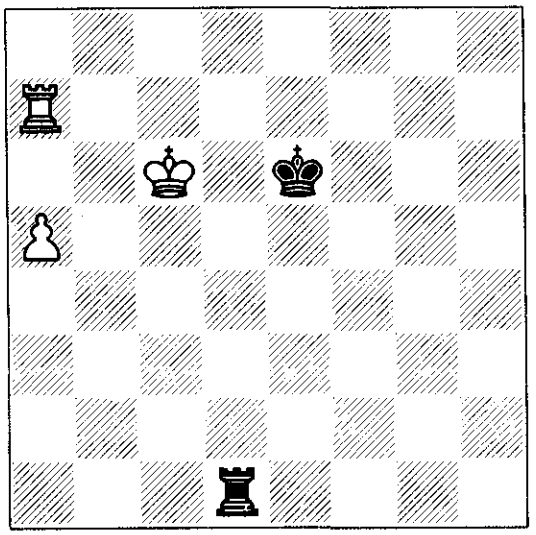
107 +/=

*Grigoriev, 1936*
*'64'*

**(107):** White to play wins by 1 a6 ♖c1+ (1...♖a1 2 ♖a8 is diagram 52) 2 ♔b7! ♔d7 (2...♔d6 3 ♔b8! ♖a1 4 ♖h7 wins, as does 2...♔d5 3 ♔b8! ♖a1 4 ♖d7+! ♔e6 5 ♖h7) 3 ♔b8+! ♔d8 4 ♖h7 ♖b1+ 5 ♖b7! ♖c1 6 ♖b2 ♖c8+ 7 ♔b7! ♖c7+ 8 ♔b6 followed by a7. Black to move draws by 1...♖c1+ and 2...♔d6.

**(108):** It is interesting to note that moving Black's rook to d1 or d2 results in a draw, for example:

1) **1 ♖h7** ♖a1! (1...♖c1+? 2 ♔b7! ♖b1+ 3 ♔c8 ♖c1+ 4 ♔b8 ♖b1+ 5 ♖b7 ♖a1 6 ♖b6+ and 7 a6) 2 ♔b6 (2 ♖h6+



108 =/=

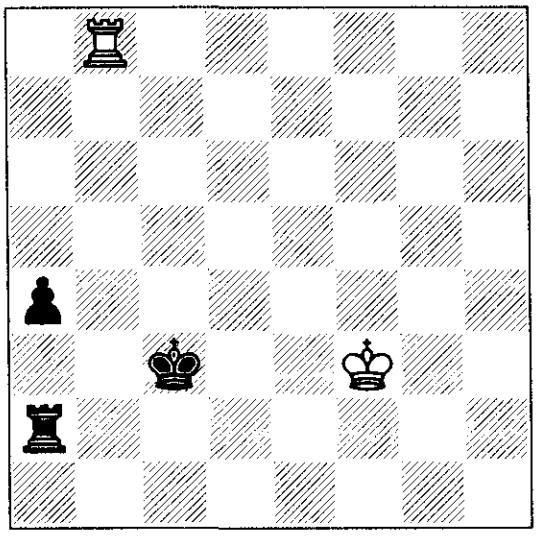
*Original*

♔e7! 3 ♔b6 ♔d7! 4 a6 ♖b1+! is similar) ♔d6! 3 ♖h6+ ♔d7! and draws.

2) 1 a6 ♖d6+! 2 ♔b5 (or 2 ♔b7 ♖d7+! and White cannot escape the checks) ♖d5+! 3 ♔c4 (3 ♔b4 ♖d4+!) ♖a5 4 ♔b4 ♖a1 5 ♖h7 ♔d6 and draws.

On the other hand, with the rook on d3 Black loses to 1 ♖h7 ♖a3 2 ♔b5! ♔d6 (or 2...♖b3+ 3 ♔a4 ♖b1 4 a6! ♖a1+ 5 ♔b5! and wins) 3 a6! and the black rook is too close to White's king.

**(109):** After 1 ♖c8+ ♔d3 2 ♖d8+ ♔c2! Black wins exactly as in the note to White's first move in diagram 105. Therefore Euwe tried 1 ♔e3, reaching diagram 107. We know that 1...a3! would have won, but Alekhine played 1...♖h2?. This allows a draw by 2 ♖a8! as in line 1 of the previous diagram, but Euwe continued 2 ♖c8+? and Black won by 2...♔b2! 3 ♖b8+ ♔c1 4 ♖c8+ ♔b1 5 ♖b8+ ♖b2 6 ♖a8 ♖b3+ 7 ♔d4 a3 8 ♔c4 ♔b2 9 ♖h8 ♖c3+ 0-1.

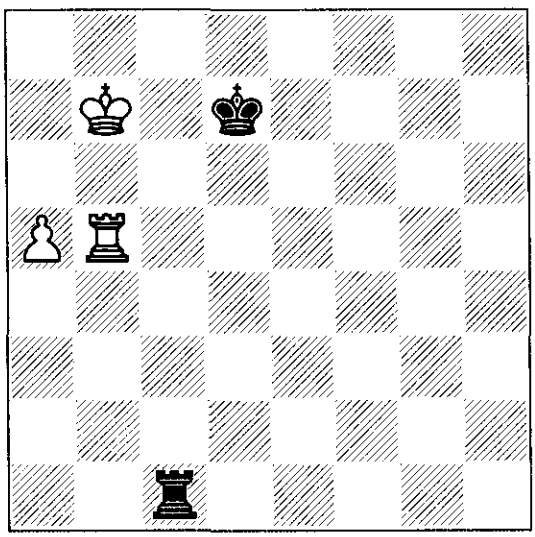


109 –/

**Euwe – Alekhine**

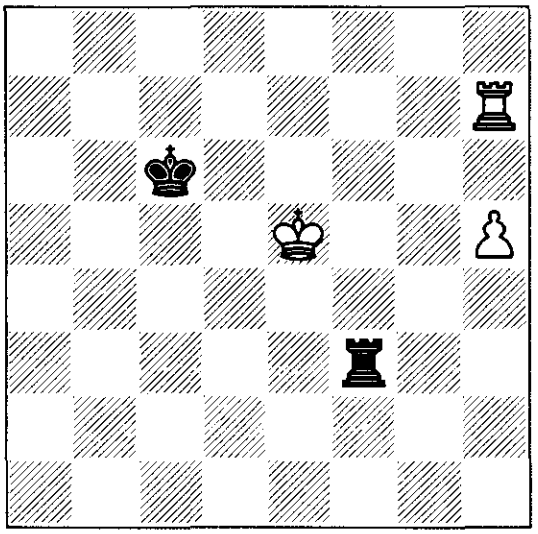
*Den Bosch World Ch (16), 1935*

The following position is an important drawing possibility. Although the play is quite simple it deserves a diagram because it often arises in practice.



110 =/=

**(110):** After 1 a6 ♖c7+! 2 ♔b6 ♖c6+! Black draws as in diagram 78, while 1 ♖b4 ♖c7+! 2 ♔b6 ♔c8 3 a6 ♔b8! and 1 ♖d5+ ♔e6! 2 ♖d4 ♖b1+! 3 ♔c6 ♖c1+ offer no chances at all.



111 /–

**Gelfand – King**
*European Team Ch, Haifa 1989*

**(111):** We are already familiar with this general type of position, but here Black's rook is unfortunately placed. If it were on f1 or f2 then Black would be able to draw by 1...♖e1/e2+! 2 ♔f6 ♔d6! reaching diagram 108.

**1 ... ♖f1**

A very reasonable move increasing Black's checking distance. The alternative was 1...♖d3 (or 1...♖e3+ 2 ♔f6 and now 2...♔d6 3 ♖a7 is the previous diagram while 2...♖f3+ 3 ♔e6 ♖e3+ 4 ♔f7 wins as in the note to White's first move in Tarjan-Nikolić on page 65) 2 h6 ♖d5+ 3 ♔e4 ♖h5 (3...♖d6 4 ♖a7) 4 ♖h8! leading to a Romanovsky win for White.

**2 ♖g7?**

This should have thrown away the win. The simplest method was 2 h6 (2 ♔e6 is also good, as in the previous note) when sooner or later Black will have to play ...♖h1, when White replies ♖h8 with a Romanovsky win, for example 2...♖e1+ 3 ♔f6 ♖f1+ 4 ♔e7 ♖e1+ 5 ♔f8 ♖h1 (5...♖f1+ 6 ♖f7) 6 ♖h8 ♔d7 (passive play is hopeless, so Black tries to bring his king across) 7 ♔g7 ♖g1+ (7...♔e6 8 ♖e8+! ♔d7 9 ♖e5 and 7...♔e7 8 h7 are also hopeless) 8 ♔f6 and with Black's king stranded outside the safe zone White brings his king back along the f- and g-files, eventually winning Black's rook.

**2 ... ♖e1+?**

Just when Black had a draw he hands the half-point back again. The correct line was 2...♖h1! (not mentioned by Gelfand in *Informator*) 3 ♖g5 (3 ♖h7 ♖e1+ 4 ♔f6 ♔d6 is the position Black has been aiming for and 3 ♖g6+ ♔d7 4 h6 ♔e7 is simple) ♔d7! 4 ♔f6 ♖f1+! 5 ♔g7 ♔e7! reaching diagram 110.

**3 ♔f6!**

Not 3 ♔f5? ♔d6!.

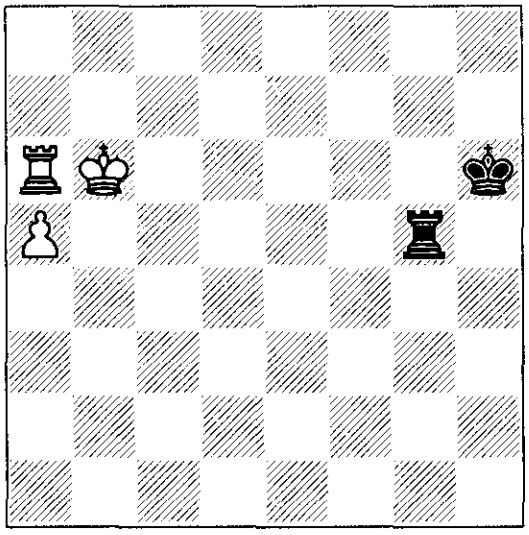
**3 ... ♖f1+**

3...♔d6 puts up a better fight. In *Informator* Gelfand gives 4 ♖g4 (4 ♖g5? ♖f1+ 5 ♔g7 ♔e7 is diagram 110 again) ♖f1+ 5 ♔g7 as winning, but this line conceals another double error. After 4 ♖g4? Black can draw by 4...♖e6+! 5 ♔f7/g7 (5 ♔f5/g5 ♔e7) ♖e7+! 6 ♔g6 (6 ♔f8 ♖h7 7 ♖g5 ♔e6

8 ♔g8 ♖a7 9 h6 ♔f6! draws) ♖e6+! 7 ♔h7 ♖e7+ 8 ♖g7 ♖e1 9 h6 ♔e6! 10 ♔g8 ♔f6!. The only winning line after 3...♔d6 is the surprising 4 ♔f7! (threat h6) ♖f1+ (4...♖h1 5 ♖g6+ and h6) 5 ♔g8! ♖h1 6 ♖g6+ ♔e7 7 h6! and the pawn runs through.

**4 ♔e6 ♖e1+** (4...♖h1 5 ♖g5) **5 ♔f7 ♖f1+ 6 ♔g8 ♖h1 7 ♖g6+ ♔d7 8 h6! 1-0.**

Some very interesting zugzwang positions can arise when White's rook is in front of the pawn. Here are two examples.



112 =/–

*Original*

**(112):** If White can free his rook then he should win because his king is very close to the pawn. First of all assume Black is to play. The analysis is:

1) **1...♔g7/h7** 2 ♖a7+ followed by ♖c7 and the rook escapes.

2) **1...♔g6** 2 ♖a8 and now Black's king blocks the rook checks, so White gains time for ♖c8.

3) **1...♖g1** (releasing the pressure on a5) 2 ♔c7+ followed by ♖c6.

4) **1...♖f5** 2 ♖a8! (Black no longer has a Vancura draw because his rook is not defended by his king) ♖f6+ 3 ♔c7 ♖f7+ 4 ♔d6 ♖f5 (4...♖f6+ 5 ♔e7 wins after 5...♖g6 6 ♖c8 or 5...♖f5 6 a6! ♖a5 7 ♔d7 and Romanovsky's recipe works) 5 a6! ♔g7 (trying to exploit the position of White's king on the sixth rank) 6 ♖a7+ and wins as in diagram 40.

5) **1...♔h5** 2 ♖a8! (now Black lacks his check on g7) ♖g6+ 3 ♔c7 ♖g7+ 4 ♔d6 ♖g6+ (4...♖g5 5 a6 and Black's king is too far from g7) 5 ♔e7 ♖g7+ 6 ♔f6 ♖g6+ 7 ♔f7 and now:

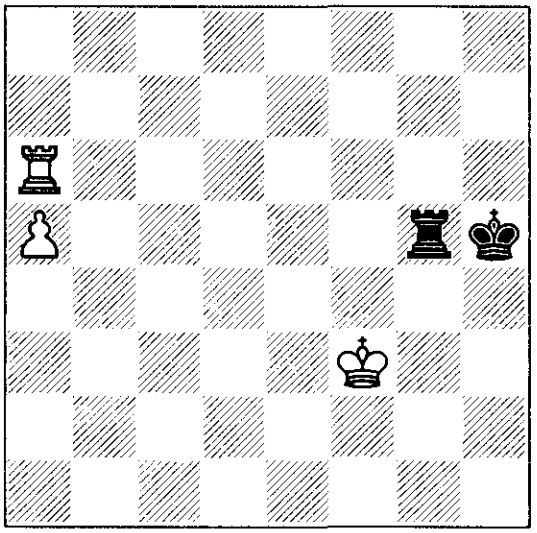
5a) **7...♖h6** (White threatened 8 ♖h8+ and 9 ♖g8, so the rook must abandon the g-file) 8 ♖b8 (8 ♔e7 is faster, but this is the simplest win) ♖a6 (8...♔g4 9 ♖b6) 9 ♖b5+ ♔g4 10 ♔e7 ♔f4 11 ♔d7 ♔e4 12 ♔c7 ♔d4 13 ♔b7 ♖h6 14 a6 ♔c4 15 ♖g5 ♖h7+ 16 ♔b6 ♖h6+ 17 ♔a5 ♖h7 18 ♖b5 followed by ♖b7 and wins much as in diagram 73.

5b) **7...♖c6** 8 ♖b8 ♖c7+ (8...♖a6 is line 5a) 9 ♔e8 ♖a7 10 ♖b5+! ♔g4 11 ♔d8 with an easy win.

With White to play, 1 ♔c6 (or any other king move) leaves the rook tied to the defence of a5, so Black plays 1...♔g7 2 ♖a8 (2 ♖a7+ and 3 ♖c7 is impossible) ♖f5 with a Vancura draw. The only other possibility is 1 ♖a8 (1 ♖a7 is similar), but now Black has a check on g6 and after 1...♖g6+ 2 ♔c7 ♖g7+! 3 ♔d6 ♖g6+ 4 ♔e5 (or 4 ♔e7 ♖g7+ 5 ♔f8 ♖g5 6 a6 ♖g6! 7 ♔f7 ♖b6 8 ♔e7 ♔g7 drawing) ♖g5+ 5

♔f4 ♖b5 6 a6 ♔g7 the position is drawn.

If we move Black's pieces one square to the left in diagram 112 (this gives W♔b6, ♖a6, ♙a5 v B♔g6, ♖f5) the same logic operates and we again have a position of reciprocal zugzwang. However, a further shift to the left destroys the reciprocal zugzwang and results in a position which is winning for White whoever moves first.



113 =/–

*Original*

**(113):** Here the zugzwang is easier to understand. Suppose Black is to move. He has no king moves, and moving the rook along the g-file frees the white rook and loses, e.g. 1...♖g1 2 ♖b6! (2 ♖c6? ♖a1! 3 a6 ♖a4! 4 ♔e3 ♔g5 5 ♔d3 ♔f5! 6 ♔c3 ♔e5! 7 ♔b3 ♔d5! gains a tempo and draws) ♖a1 (2...♔g5 3 ♔e4 and Black's king is cut off along a rank) 3 a6! ♖a4 4 ♔e3 ♔g5 5 ♔d3 ♔f5 6 ♔c3 ♔e5 7 ♔b3! ♖a1 8 ♔c4! and the white king advances. This only leaves rook moves along the rank, but after 1...♖e5 (other moves allow an immediate ♔e4) 2 ♔f4! all lines lose:

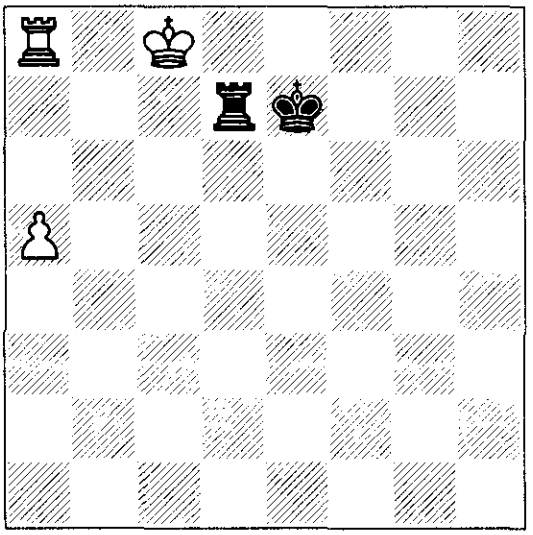
1) **2...♖b5** 3 ♔e4 ♔g5 (3...♖g5 4 ♖a8! ♖g4+ 5 ♔f5 is line 2 below) 4 ♔d4 ♖f5 (4...♔f5 5 ♖a8 ♔f6 6 a6 wins) 5 ♖a8 ♖f4+ 6 ♔e5 and White plays his king to e7 and wins much as in line 2 below.

2) **2...♖g5** 3 ♖a8! ♖g4+ (White has gained the move ♖a8 and this makes all the difference) 4 ♔f5 ♖g5+ 5 ♔f6 (with the rook on a6 this is impossible) ♖g6+ 6 ♔f7 transposing into line 5 in the previous diagram.

With White to play, 1 ♔e4 (1 ♖a8 frees Black's king and leads to a Vancura draw after 1...♔h6! 2 ♔f4 ♖b5 3 a6 ♔g7) ♖g4+! 2 ♔d5 ♖g5+! 3 ♔c6 leads to a position in which Black can draw either by 3...♔g6 4 ♔b6 ♔h6 (or 4...♖f5 reaching the position mentioned after diagram 112) and we have diagram 112 with White to move, or by 3...♖g6+ 4 ♔b7 ♖g7+! 5 ♔c8 ♖g8+! 6 ♔d7 ♖g7+ 7 ♔e8 ♖g5! 8 ♔f7 (8 ♖a7 ♔h6) ♖b5 9 ♖a8 ♔g5 (9...♔h6 is also possible) 10 a6 ♖b6! 11 a7 (11 ♔e7 ♔g6 12 ♔d7 ♔g7 13 ♔c7 ♖f6) ♖b7+! 12 ♔e6 ♖g7! with a draw as in diagram 14.

Just as in the previous diagram, we can shift the kingside pieces to the left by one file and the reciprocal zugzwang still holds (W♔e3, ♖a6, ♙a5 v B♔g5, ♖f5). Once again, a further shift to the left produces a White win whoever moves first.

**(114):** White to play cannot win, for example 1 ♖b8 (1 a6 ♔d6! and 1 ♖a6 ♖d8+! 2 ♔c7 ♖d7+! 3 ♔c6 ♖d6+ 4 ♔b5 ♖d1 draw comfortably) ♖d8+!



114 =/–

*Original*

2 ♔b7 ♖d7+! 3 ♔b6 (3 ♔a6 ♖d1 followed by ...♔d7) ♖d6+! 4 ♔c5 (4 ♔b5 ♖d1 5 ♖h8 ♖b1+ and 4 ♔a7 ♔d7! are easy draws) ♔d7 and with the rook on b8 rather than a8, the line 5 ♖b7+ ♔c8! is a draw.

However, Black to play loses:

1) **1...♔e8** (moving away from d6) 2 a6 (threat ♖b8) ♔e7 3 ♖b8! ♖d8+ 4 ♔c7 ♖d7+ 5 ♔b6 ♖d6+ 6 ♔a5 ♖d5+ 7 ♖b5 followed by a7.

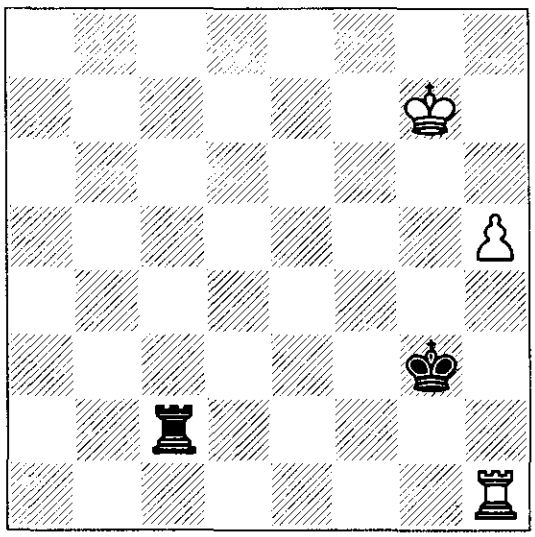
2) **1...♔d6/e6** 2 ♖a6+! ♔e7 3 ♖c6 ♖d8+ 4 ♔b7 and the pawn advances.

3) **1...♖d1** 2 a6 (threat ♖a7+) ♖c1+ 3 ♔b7 ♖b1+ 4 ♔c6 wins as in diagram 37, line 2.

4) **1...♖d8+** 2 ♔b7! ♖d7+ 3 ♔c6 ♖d6+ 4 ♔c5! ♖d8 (4...♖h6 5 a6! and 4...♔d7 5 ♖a7+! ♔e6 6 ♖c7 ♖d5+ 7 ♔b6! ♖d1 8 a6 ♖b1+ 9 ♔c6 ♖c1+ 10 ♔b7 ♖b1+ 11 ♔c8 are also winning) 5 ♖a7+! ♔e6 6 ♖h7 (6 ♖c7? ♖a8! leads to a draw) and wins after 6...♖a8 7 a6, 6...♖d5+ 7 ♔b6! ♖d6+ 8 ♔b7 or 6...♖d1 7 a6! ♖c1+ 8 ♔b6 heading for c8.

## 1.3.4: White's rook is behind the pawn

In most cases the comments from sections 1.1.3 and 1.2.3 apply here too, but we present a few examples which are not simply a matter of timing.



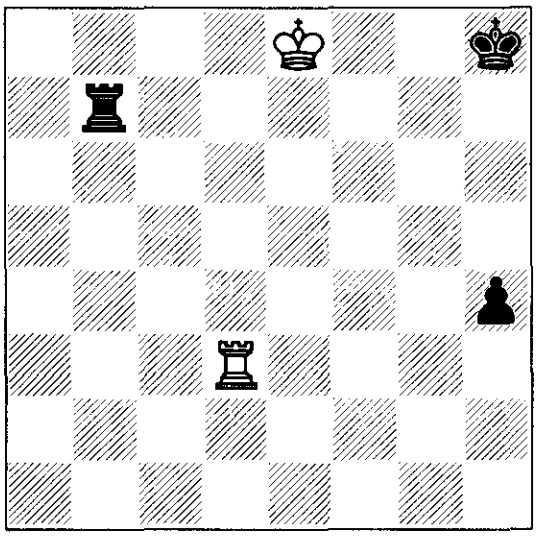
115 /=

**Gufeld – Bronstein**

*Kislovodsk 1968*

(**115**): The threat is h6, so Black's first moves are forced: 1...♖c7+! 2 ♔f6 ♖c6+! 3 ♔f7 ♖c7+! 4 ♔e6 ♖c6+! 5 ♔d5 (after 5 ♔f5 ♖c5+! 6 ♔e4 Black has an easy draw by 6...♔g2! winning the pawn) ♖h6! 6 ♔e4 and now the game ended with the simple draw 6...♔g2 7 ♖h4 ♔g3 8 ♖h1 ♔g2 ½-½. In *ECE*, Kasparov incorrectly gives 6...♔g4 as a loss. After 7 ♖g1+ ♔h4? White can indeed win by 8 ♔f5! ♖a6 9 ♖h1+! (but not 9 h6? ♖a5+ drawing) ♔g3 10 h6 ♖a5+ 11 ♔e4 ♖a4+ 12 ♔d5 ♖a5+ 13 ♔c6 ♖a8 14 h7 ♖h8 15 ♔d7 ♔g4 16 ♔e7 ♔g5 17 ♔f7. However, Black can secure a draw by means of 7...♔h3! 8 ♔f4 ♔h2! 9 ♖g5

♔h3! 10 ♖a5 ♔h4! 11 ♖a1 ♖f6+! 12 ♔e5 ♖b6.



116 =/+
*Kondratiev and Kopnin, 1986*
*2nd HM, Molody Leninets*

**(116):** The study is 'White to play and draw', but it is worth noting that Black to play wins by 1...♖h7 2 ♖h3 ♔g7 followed by marching the king to g4.

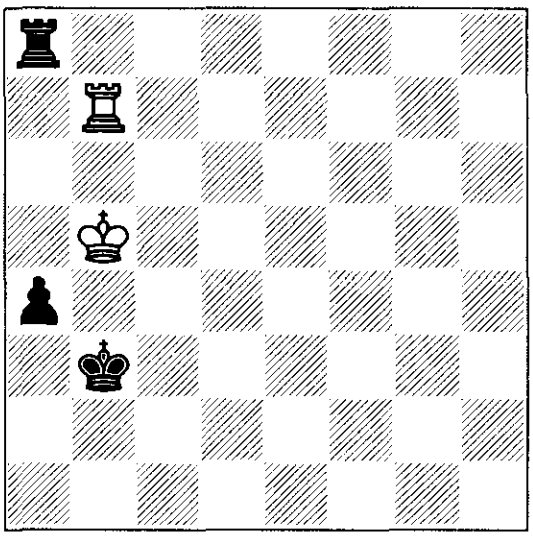
**1 ♔f8!**

Not 1 ♖h3? (1 ♖d4? h3!) ♖h7! 2 ♔f8 ♖h6! (not 2...♖h5? 3 ♔f7! ♔h7 4 ♔f6 ♔h6 5 ♖a3 h3 6 ♖a8 drawing) 3 ♔f7 ♔h7! giving the reciprocal zugzwang of diagram 96 with White to move.

**1 ... ♖h7**

Or 1...♖b4 2 ♔f7 ♔h7 3 ♔f6 ♔h6 4 ♔f5 ♔h5 5 ♖d8 with an easy draw.

**2 ♖d4!** (this is an accurate choice of square; White intends to transfer his rook to the g-file, but he must also prevent Black playing a later ...♖h4) **h3 3 ♖g4! ♖h5** (if White's rook were on g1, for example, Black could play ...♖h4 and give his king enough room to escape from the perpetual check) **4 ♔f7! h2** (or 4...♖h7+ 5 ♔f8) **5 ♖g8+** with perpetual check.



117 =/
*Grigoriev, 1952*

**(117):** White must be precise.

**1 ♖h7!**

It appears likely that White should switch his rook to the side, but it is hard to believe that 1 ♖h7! draws while 1 ♖g7? loses. Black wins after 1 ♔c5+? ♔c3 2 ♖h7 ♖c8+ 3 ♔d5 (to allow a check on the b-file at move 5) a3 4 ♖a7 ♔b2 5 ♖b7+ ♔c2 6 ♖a7 ♖c3 followed by ...♔b2 and wins. We will see below why 1 ♖g7? loses.

**1 ... a3**

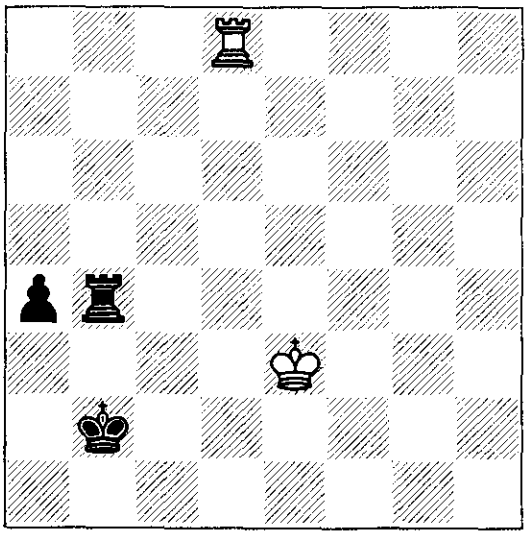
1...♖b8+ 2 ♔a5! (2 ♔c5? ♖c8+ and ...a3 as in the previous note) a3 3

♖h3+! ♔c4 (3...♔a2 4 ♔a4 draws) 4 ♖h4+! ♔d5 5 ♖h5+! ♔e4 6 ♖h4+! ♔e5 7 ♖h5+! ♔f4 8 ♖h1 (or 8 ♖h4+) draws.

**2 ♖h3+! ♔c2 3 ♖h2+! ♔d3 4 ♖h3+! ♔e4** (4...♔e2 5 ♖h2+! ♔f3 6 ♖a2 draws) **5 ♖h4+! ♔f3** (if White's rook were on g4, Black could win by 5...♔e3 when 6 ♖g3+ ♔f2 and 6 ♖g1 a2 7 ♖a1 ♔d3 are hopeless) **6 ♖h1! a2 7 ♖a1! ♔e3 8 ♔c4!** (8 ♔b4? ♔d3 9 ♔b3 ♖b8+! wins) **♔d2 9 ♔b3! ♖b8+ 10 ♔c4! ♖b2 11 ♖h1** drawing.

### 1.3.5 Other situations

This could cover a huge range of possibilities, but we content ourselves with a few interesting examples.

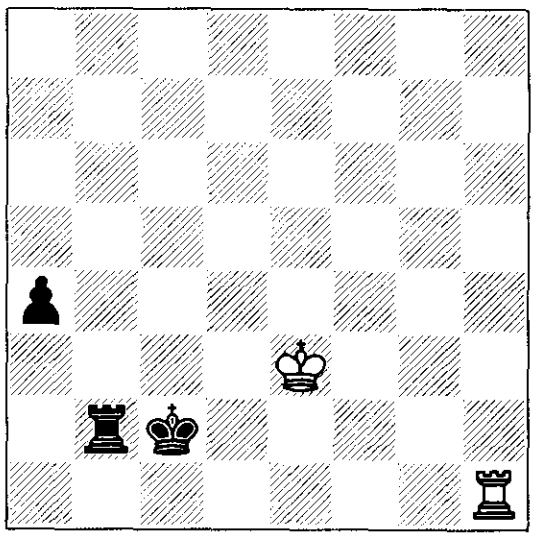


118 =/

**(118):** This position arose in Polugaevsky's analysis of the adjourned game Planinc-Polugaevsky, Mar del Plata 1971. In his book *Grandmaster Preparation*, Polugaevsky comments that Black has a 'study-like win', and *ECE* follows his analysis. However, the position is drawn. The analysis runs 1 ♖d2+! (Black threatens ...a3, hence White must play actively) and now:

1) **1...♔b3** 2 ♖d3+! ♔a2 3 ♖d2+! (3 ♔d2 ♔b2!) ♖b2 4 ♖d8 (4 ♖d4 loses to 4...♔b3!, when 5 ♔d3 ♖b1! is diagram 95 while 5 ♖d3+ ♔c2! 6 ♔e2 ♔b1+ followed by ...♖b3 wins; not, however, 4...a3? 5 ♔d3! drawing) a3 5 ♔d3! ♔b1 6 ♔c3! ♖c2+ 7 ♔b3! draws.

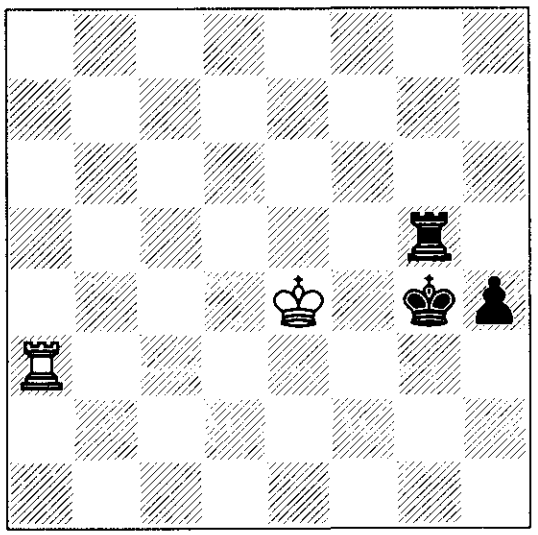
2) **1...♔c1** 2 ♖h2 ♖b2 (2...a3 3 ♔d3! draws after 3...♖g4 4 ♔c3 ♖g3+ 5 ♔b4) 3 ♖h1+! (3 ♖h8? a3 4 ♔d3 ♖c2! wins) ♔c2 *(D)* reaching the key position:



118a =/+

2a) **4 ♖h2+?** ♔c3! (4...♔b3? 5 ♖h8! a3 6 ♔d3 draws) 5 ♖h8 ♖b5 6 ♖c8+ (6 ♖a8 ♔b3! 7 ♔d2 a3) ♔b2 7 ♔d3 (or 7 ♔d2 a3) a3! 8 ♖c2+ ♔b1 and 9...a2 wins.

2b) **4 ♔d4!** (the move Polugaevsky overlooked) ♖b4+ (4...a3 5 ♔c4! draws, as does 4...♖b1 5 ♖h3) 5 ♔c5! ♖e4 6 ♖h2+ draws.



119 =/

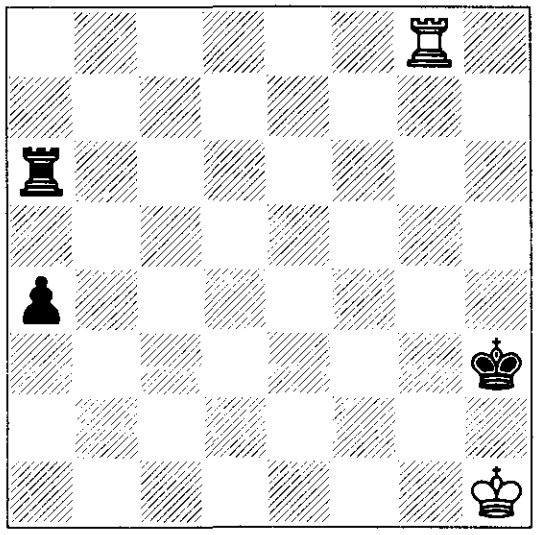
**Zinn – Bronstein**
*Berlin 1969*

**(119):** White may try:

1) **1 ♖a1?** (the game continuation) h3! 2 ♔e3 (2 ♖g1+ ♔h4 3 ♖h1 ♖g2 4 ♔f3 ♖a2 followed by ...h2 and ...♔h3 wins, but perhaps 3 ♖xg5 h2 4 ♖e5 h1♕ 5 ♔f4 is a better chance, when Black can win in 31 moves with accurate play!) h2 3 ♔f2 ♖a5! 4 ♖xa5 (4 ♖b1 ♖a2+) h1♕ and Black can win in 29 moves with best play. In fact White resigned after only a few moves.

2) **1 ♔e3!** ♖f5 (1...♔g3 2 ♔e4+! and 1...h3 2 ♔f2! draw, but not 2 ♔e2+? due to 2...♔g2! winning) 2 ♖a8 h3 3 ♖g8+ ♔h4 4 ♖h8+! ♔g3 5 ♖g8+! with a simple draw.

Finally, it is always worth looking out for tactical points.



120 =/+

**(120):** With White to play, 1 ♖g6! is stalemate or perpetual attack on Black's rook. It is interesting to note that 1 ♖g2? loses to 1...♖d6 (but not 1...a3? 2 ♖a2! ♔g3 3 ♔g1! ♔f3 4 ♔f1! ♔e3 5 ♔e1! ♔d3 6 ♔d1! ♔c3 7 ♔c1 ♔b3! 8 ♔b1 ♖h6 9 ♖b2+! with a draw) 2 ♖h2+ (2 ♖g1 a3 3 ♖a1 a2 4 ♔g1 ♔g3 wins) ♔g3! 3 ♖g2+ ♔f3 4 ♖a2 ♖d4 5 ♔g1 ♔e3 and wins. Black to play wins by 1...a3! 2 ♖g6 ♖a4 and he evades the stalemate.

There are seven reciprocal zugzwang positions with ♖+♙a5 v ♖. Six may be found in diagrams 96, 112 (with one related position), 113 (with one related position) and 114. The final one is W♔c5, ♖b5, ♙a5 v B♔e5, ♖a6.

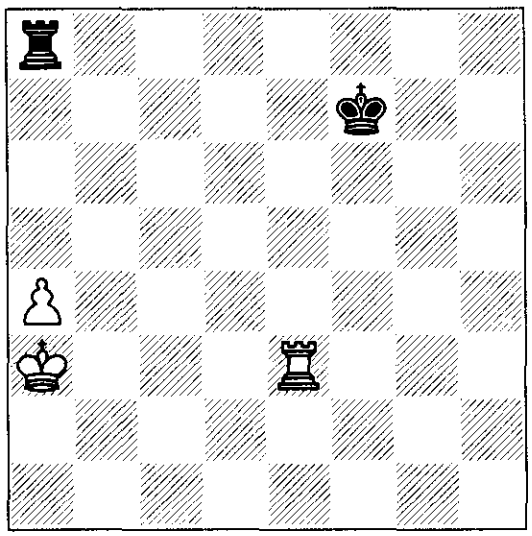
**Practical tips:** It is important to know the winning 'cut-off' distance of four files (see diagrams 87 and 91), and to be aware that if Black's pieces are not optimally placed then White can sometimes win even if Black's king is only cut off by three files. The Romanovsky-type position of diagram 97 is of considerable practical importance and it is worth knowing the conclusions, if not the details. Diagrams 108 and 110 are common drawing positions and the defender's task is greatly eased if he knows these 'target' positions.

# 1.4: Pawn on the fourth rank

1.4.1: Black's king is cut off along a file 75
1.4.2: White's rook is in front of the pawn 81
1.4.3: Other situations 85

## 1.4.1: Black's king is cut off along a file

Once again we investigate how far away the black king has to be in order for White to win. Chéron answered all the basic questions when Black's rook is in front of the pawn.



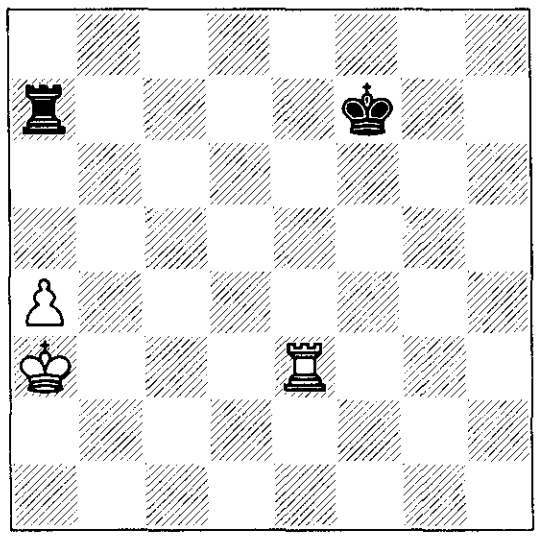
121 =/=

*Chéron, 1926*

**(121):** This was a win with the pawn on the 5th rank, but here it is a draw after 1 ♔b4 ♖e8! (not 1...♖b8+? 2 ♔c5 ♖c8+ 3 ♔b6 ♖b8+ 4 ♔a7 followed by a5 and a6, eventually winning by ♔a8, a7 and playing the rook to b8) 2 ♖d3 ♔e7 3 a5 ♖d8 4 ♖c3 ♔d7 5 a6 ♖c8 and Black's king arrives in time.

However, this draw only works if Black's pieces are on their optimum squares. If we move Black's king to f6 then he doesn't have the ...♖e8 defence and 1 ♔b4! ♖b8+ wins as above.

Likewise, moving Black's rook to a7 in the diagram gives White a win.



122 +/=

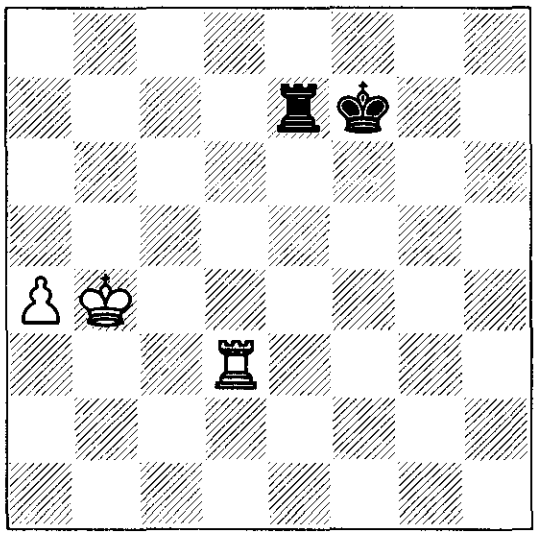
*Chéron, 1926*

**(122):** 1 ♔b4! ♖e7 and now:

1) **2 ♖a3?** (given by Chéron, this move in fact allows Black to draw, one of the very few instances of Chéron making an analytical mistake in a basic ending) ♔e8 (2...♔e6 is the same) 3 a5 ♔d7! (Chéron only gave 3...♔d8? which loses after 4 a6! ♖a7 5 ♔b5 ♔c8 6 ♖h3 ♔b8 7 ♖h8+! ♔c7 8 ♖g8) 4 a6 ♔c6! (this surprising counterattack

saves the game) 5 a7 ♖e4+! 6 ♔a5 (6 ♔b3/c3 ♖e3+) ♔b7! drawing.

2) **2 ♖d3!** *(D)* and now:



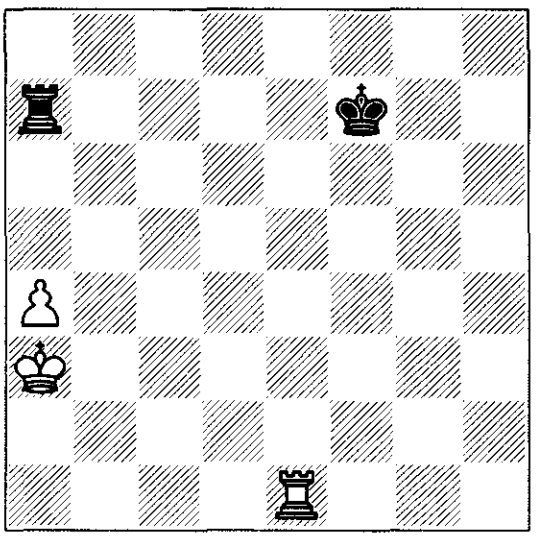
122a +/–

2a) **2...♔e8** 3 a5! ♖d7 4 ♖a3! ♔d8 (Black's rook has blocked d7 and cut out the ...♔d7-c6 defence) 5 a6! ♖a7 6 ♔b5 and White wins as in line 1 after 3...♔d8?.

2b) **2...♖e4+** 3 ♔b5! ♖e5+ 4 ♔b6! ♖e6+ 5 ♔c7! ♖e5 6 ♖a3 ♖e7+ 7 ♔c6 ♖e6+ 8 ♔c5 ♖e5+ 9 ♔c4! (not 9 ♔d4? ♖a5 10 ♔c4 ♔e7 11 ♔b4 ♖a8 nor 9 ♔b4? ♔e7 10 a5 ♔d7 11 a6 ♔c6! with a draw in both cases) ♖a5 (9...♖e4+ 10 ♔d5 ♖e1 11 a5 ♖d1+ 12 ♔c5 ♖c1+ 13 ♔b5 ♖b1+ 14 ♔a4 wins, while the ...♔e7-d7-c6 defence fails if White can meet ...♖e4+ by ♔d3) 10 ♔b4! ♖a8 11 a5 ♔e7 12 a6 ♔d7 13 ♔a5 ♔c7 14 ♖c3+! ♔b8 (14...♔d7 15 ♖h3 ♔c7 16 ♖h7+ and a7 wins) 15 ♖h3 (15 ♔b6? ♖a7! 16 ♖h3 ♖b7+! draws) ♖a7 16 ♖h8+! ♔c7 17 ♔b5 wins.

2c) **2...♖e2** 3 a5! ♔e7 (3...♖b2+ 4 ♖b3 ♖a2 5 ♖a3 ♖b2+ 6 ♔a4 wins) 4 a6! ♖a2 5 ♖a3 and wins.

Readers will have noted that Black's defence to 2 ♖a3? depended crucially on the fact that White's rook is on the third rank. One might expect that with the rook on e1 or e2, 2 ♖a3 would win. This turns out to be true, but surprisingly the 2 ♖d3 line no longer works, so with the rook on e1 or e2 the winning procedure is entirely different!



123 +/=

*Original*

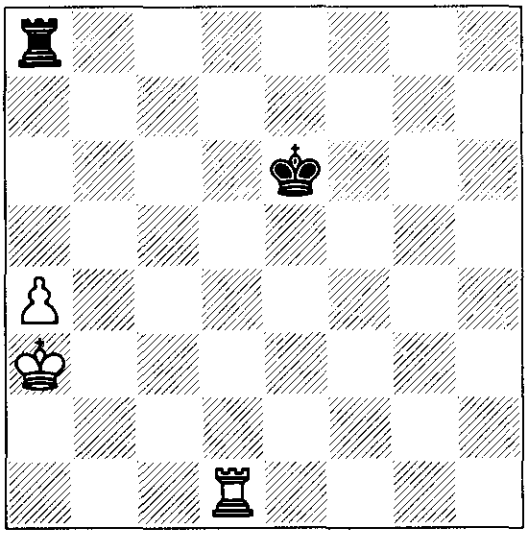
**(123):** 1 ♔b4! ♖e7 and now:

1) **2 ♖d1?** ♖e2 3 a5 ♔e7 4 a6 (when White's rook is on the third rank it can interpose on a3 or b3, but now there is no defence against Black's checks) ♖a2 5 ♔b5 ♖b2+! and Black checks the king to a7, with a draw because the black king is just close enough.

2) **2 ♖a1!** ♖e4+ (2...♔e8 3 a5! ♔d7/d8 4 a6! and wins because Black lacks the ...♔c6 and ...♖e4+ defence) 3 ♔b5 ♖e5+ 4 ♔c4 and wins as in line 2b of the previous diagram.

The winning procedure with the rook on e2 is exactly the same.

If the king is only cut off on the d-file then White is unable to win even if Black's pieces are unfavourably placed.



124 =/=

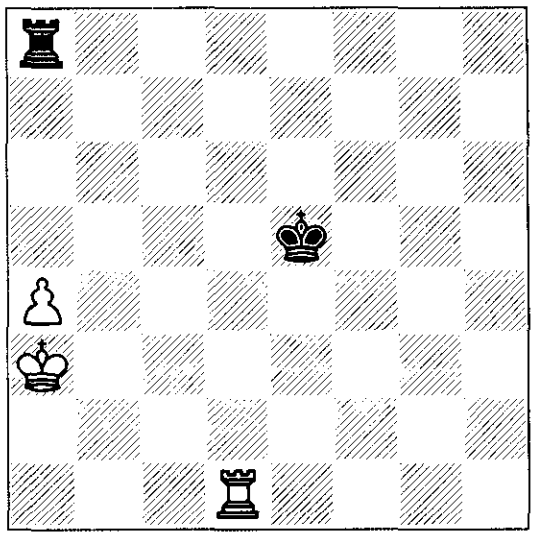
*ECE, 1985*

**(124):** After 1 ♔b4 *ECE* rather strangely gives 1...♔e7 the 'only move' symbol, when in fact 11 of Black's 16 legal moves lead to a draw! Even more strangely, they give the position after 1 ♔b4 with White to move in the analysis of another diagram, concluding correctly that even this is drawn. To take one example, *ECE* gives 1 ♔b4 ♖b8+ as losing after 2 ♔c5 ♖a8 3 ♔b5 ♖b8+ 4 ♔c6 ♖a8? 5 ♖e1+! ♔f7 6 ♖a1 ♔e8 7 a5, but 4...♖c8+! 5 ♔b7 ♖c2 6 a5 (or 6 ♖b1 ♔d7 7 a5 ♖c7+!) ♖b2+ draws easily enough.

Suppose we move Black's king down the e-file; when does the position become won for White? With the king on e5 the position is still a draw.

**(125):** 1 ♔b4 and now:

1) **1...♔e6** (this is the simplest draw, but *ECE* is wrong in giving it the 'only move' symbol) 2 a5 (2 ♔b5 ♔e7 3 a5 ♖d8 draws) ♔e7 3 ♖d5 ♖d8 4 ♖b5 ♔d6 5 a6 ♔c6 draws.



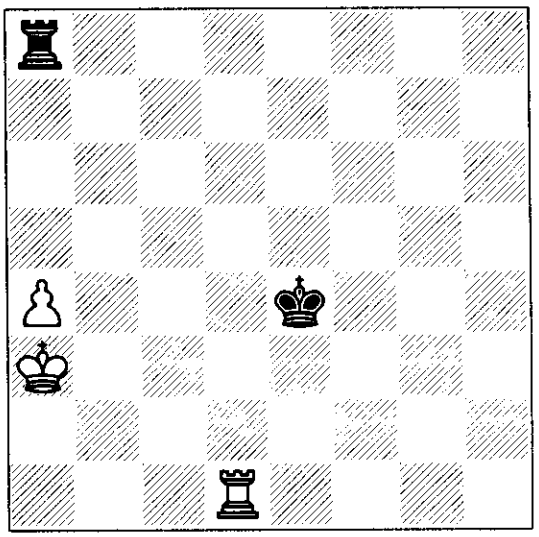
125 =/=

*Popović, 1948*

2) **1...♖b8+** 2 ♔c5 ♖c8+ (*ECE*'s 2...♖a8 does lose after 3 ♖e1+!, but why should Black give White the opportunity to force his king away?) 3 ♔b6 ♖b8+ 4 ♔c7 (4 ♔c6 ♖c8+! 5 ♔b7 ♖c2 is similar) ♖b2! (4...♖b3? 5 a5! and when Black starts checking, White retreats his king to b4, gaining a tempo by attacking Black's rook) 5 a5 ♖c2+ 6 ♔b6 ♖b2+ 7 ♔c5 ♖c2+ 8 ♔b4 ♖a2 (8...♖b2+? 9 ♔a3! wins after 9...♖h2 10 ♔b3 or 9...♖b8 10 ♔a4) 9 ♖d8 ♔e6! (9...♖a1? 10 ♔b5! ♖b1+ 11 ♔c6 ♖c1+ 12 ♔b7 ♖b1+ 13 ♔a7 ♔e6 14 a6! ♔e7 15 ♖b8! wins) 10 ♔b5 ♔e7 drawing.

Black draws even with his king on e4.

**(126):** 1 ♔b4 ♔e5! (the 1...♖b8+ defence fails because, as we saw in line 2 of the previous diagram, with the king on e5 it only works by one tempo) 2 a5 ♔e6! 3 ♔b5 ♖b8+! 4 ♔c6

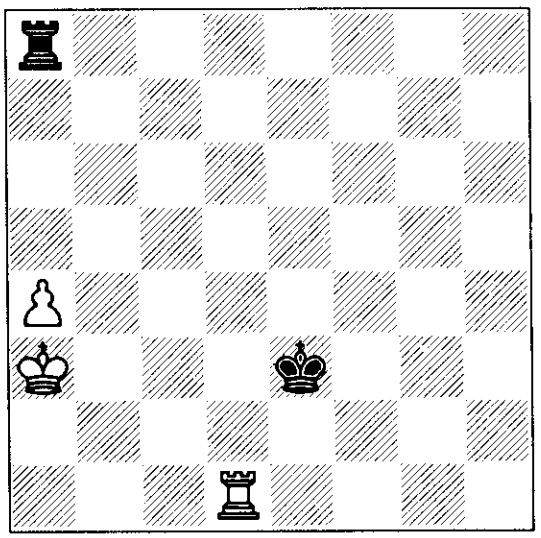


126 =/=

*Original*

♖c8+! 5 ♔b7 ♖c2! drawing just as in the analysis of diagram 87 (with the rook on d1).

Black finally loses when his king is on e3.



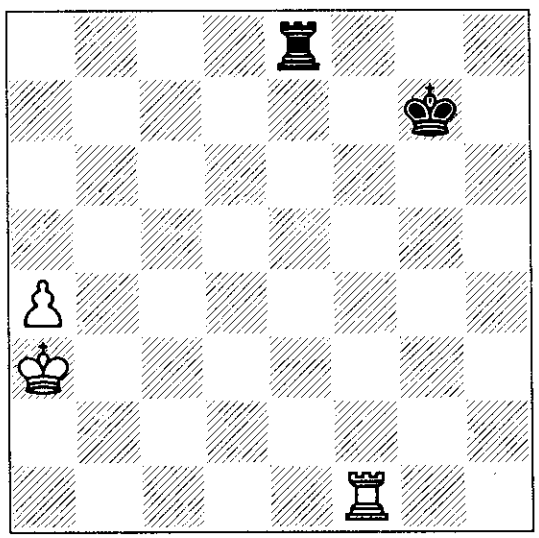
127 +/=

*Original*

**(127):** 1 ♔b4 ♖b8+ (1...♔e4 2 a5 ♔e5 3 ♔b5 ♖b8+ 4 ♔c6 ♖b2 5 a6 ♖a2 6 ♔b6 ♖b2+ 7 ♔c7 ♖c2+ 8 ♔d7 ♖a2 9 ♖d6! followed by ♔c7, ♖b6 and ♔b7 wins) 2 ♔c5 ♖a8 (2...♖c8+ 3 ♔b6 ♖b8+ 4 ♔a7 ♖b2 5 a5 ♔e4 6 a6 ♔e5 7 ♖d7 and 8 ♖b7) 3 ♖a1 ♖c8+ 4 ♔b6 ♖b8+ 5 ♔c7 ♖h8 6 a5 ♖h7+ and White wins by retreating his king to c3.

If Black's king is cut off by five files then he is dead lost. Black cannot oppose rooks by ...♖f8 because his king is too far away from the a-pawn and we saw above that if Black doesn't have this defence, he cannot save the game even when his king is one file closer.

Even lateral checks fail to help Black when his king is so far away.



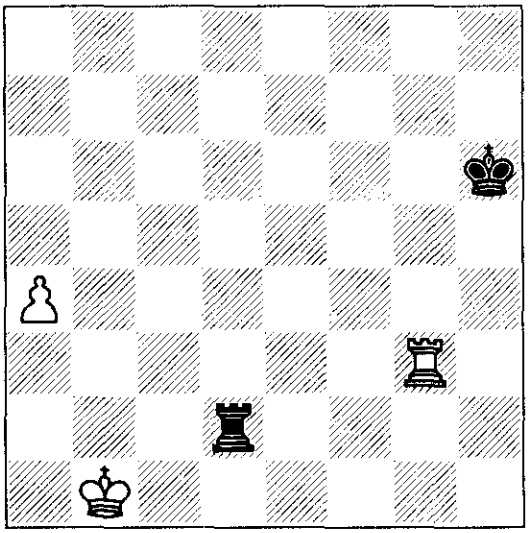
128 +/–

*ECE, 1985*

**(128):** With Black to play, 1...♖e3+ 2 ♔b4 ♖e4+ 3 ♔b5 ♖e5+ 4 ♔c6 ♖e6+ 5 ♔d7 ♖e5 (5...♖a6 6 ♖a1 is hopeless) 6 ♖a1 ♔f7 7 a5 ♖e7+ 8 ♔d6 ♖e6+ 9 ♔c5 ♖a6 10 ♔b5 leads to an easy win for White.

Chéron also investigated positions in which Black's king is cut off along a file, but White's king is cut off from the pawn by Black's rook operating

along a rank. In these cases Black can sometimes draw even when his king is stuck on the h-file (he almost always draws when his king is on the g-file).



129 +/=

*Chéron, 1944*

**(129):** This is a draw with Black to play. It is also drawn with Black's rook on h2, but if the rook is on e2 or f2 then Black loses. White to play wins wherever the rook is by 1 a5 ♖d5 2 ♖a3 ♔g6 3 a6 ♖d8 4 a7 ♖a8 5 ♔b2 and the king reaches a6, so we need only consider the position with Black to move, examining each of the four rook positions in turn.

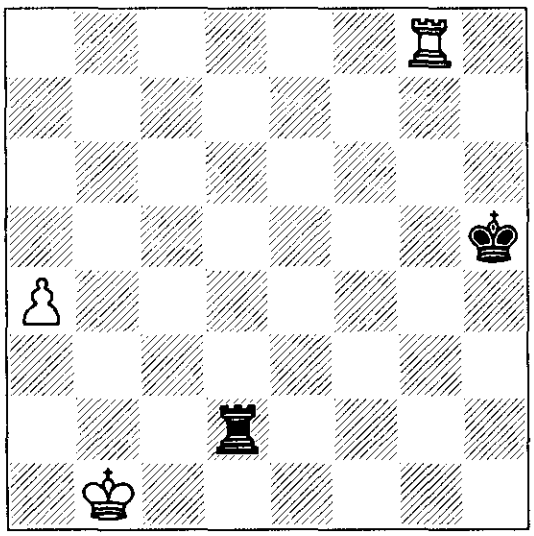
**B♖h2:** 1...♖h4! 2 ♖a3 ♔g6 3 a5 ♔f6 4 a6 ♖h8! draws.

**B♖f2:** 1...♖f4 (1...♖f8 2 ♔b2) 2 ♖a3! ♔g6 3 a5! ♖f8 (it is Black's misfortune that 3...♔f6 blocks the rook and allows a win by 4 a6! ♖b4+ 5 ♔c2 ♖b8 6 a7 ♖a8 7 ♔c3) 4 a6 ♖a8 (Black still cannot approach with his king) 5 ♔b2 (not 5 a7? ♔f7, drawing) ♔f6 6 ♔b3 ♔e6 7 ♔b4 ♔d6 8 ♔a5 ♔c7 9 ♖c3+! and 10 ♖h3 wins.

**B♖e2:** 1...♖e4 2 ♖a3! ♔g6 3 a5 ♔f6 4 a6 ♖e8 5 ♔b2 ♖a8 (Black runs into the same problem here; he cannot approach with his king, so he has to play ...♖a8 voluntarily, effectively giving White an extra tempo) 6 ♔b3 winning as before.

**B♖d2:** 1...♖d4! 2 ♖a3 ♔g6 3 a5 (3 ♔b2 ♔f6 4 ♔c3 ♖d8 5 ♔b4 ♔e6 draws) ♔f6 4 a6 ♖d8! 5 ♔b2 ♔e6 6 ♖e3+ (after 6 ♔b3, White is blocking his rook, which allows Black's king to the d-file) ♔f6 7 ♖e1 (7 ♔b3 ♖a8) ♖a8! 8 ♖a1 ♔e6 9 ♔b3 ♔d6 10 ♔b4 ♔c7 11 ♔b5 ♖h8 draws.

It is worth mentioning that the results are the same if Black's king starts on h5.



130 +/=

*Chéron, 1960*

**(130):** Here the results are different. Black to play draws if his rook is on d2 or f2, but loses if his rook is on e2 or h2.

Firstly we consider the situation with White to move.

**B♖d2:** 1 a5! and now:

1) **1...♖d5** 2 a6! ♖a5 3 ♖a8! ♔g6 4 ♔b2 ♔g7 (Black to move would draw here by ...♖b5+ and ...♖b6) 5 ♔b3 with a Romanovsky win.

2) **1...♖d6** 2 ♖g3 (2 ♖a8? ♔g6! draws as in diagram 103) ♖a6 3 ♖a3! and the tempo White gains when his king reaches b5 gives him a winning position.

3) **1...♖d7** 2 ♖a8! (not 2 ♖g3? ♖a7! 3 ♖a3 ♔g5 and Black can prevent White's king reaching b6) ♔g6 3 a6 and Black doesn't have enough time to bring his king into the safe zone.

**B♖e2:** The play is essentially the same as above. White can also win by 1 ♖g3 (see the previous diagram).

**B♖f2:** There is a crucial difference in the line 1 a5? ♖f7! 2 ♖a8 ♔g6 3 a6 ♔g7 4 a7, because this position is a draw with Black's rook on f7, whereas it was lost with the rook on e7 or d7. For example, with the rook on e7 Black checks on the e-file, but White plays his king to b6 and then c7, when ...♖a6 loses to ♔b7 and ...♖e7+ to ♔d6. When the rook is on f7 Black has extra checking distance and can hold the draw. This means that 1 a5? ♖f7! is a draw. However White to play can win by referring back to the previous diagram, which proves that 1 ♖g3! is a win (remember that it doesn't matter whether Black's king is on h6 or h5 in the previous diagram).

Now we consider the situation with Black to play.

**B♖d2:** Black has two possible continuations:

1) **1...♖d4?** (1...♖d5/6/7? 2 ♔b2 wins, while 1...♖d3? 2 a5 ♖d7 is the same as the next bracket) 2 a5! ♖a4 (2...♖d7 3 ♖a8! wins as in the analysis with White to move) 3 ♖a8! ♔g6 4 ♔c2 (4 a6? ♔g7 draws) ♔g7 (after other moves a6 wins) 5 ♔b3 ♖a1 6 a6 with a Romanovsky win.

2) **1...♔h6!** 2 a5 (2 ♖g3 ♖d4! draws as in the previous diagram; after 2 ♖g4 ♔h5! White has a choice between 3 ♖g3 ♖d4! and 3 ♖g7/8 ♔h6) ♖d5 3 a6 ♖a5! 4 ♖a8 ♔g7 and White's king is in the drawing zone.

**B♖e2:** In this case White wins because neither of the two defensive plans works. 1...♖e4 loses exactly as with the rook on d2, while 1...♔h6 fails to 2 ♖g3 winning as in the previous diagram.

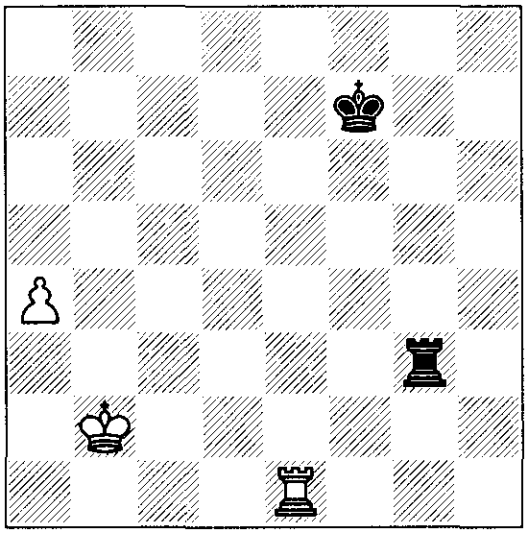
**B♖f2:** It might seem that this should also be a loss because 1...♔h6? 2 ♖g3 is again a win for White. However the rook is well-placed on the f-file for a Vancura draw, so 1...♖f4! 2 a5 ♖f7! draws, just as in the analysis with White to move. It is perhaps surprising that there is no other route to a draw, but 1...♖f3?, for example, is met by 2 ♖g2! (threat 3 ♖a2) ♖f8 3 ♔b2 ♖f4 4 ♔b3 ♖f3+ 5 ♔b4 ♖f4+ 6 ♔b5 ♖f5+ 7 ♔c6 ♖f6+ 8 ♔d5 ♖f5+ 9 ♔e6 followed by ♖a2 and wins.

**B♖h2:** Not surprisingly, the badly placed rook dooms Black. He has nothing better than to move along the second rank, but 1...♖f2 loses to 2 ♖g3 and 1...♖d2/e2 loses to 2 a5.

In this case it makes a big difference whether Black's king is on h5 or h6. If it is on h6 then Black to move draws wherever his rook is on the second rank, while with White to play

Black draws if his rook is on d2, but loses on e2, f2 and h2. This result can be deduced from the above analysis.

Finally, we consider similar positions in which White's king is on the second rank cut off by Black's rook operating on the third rank.



131 =/=

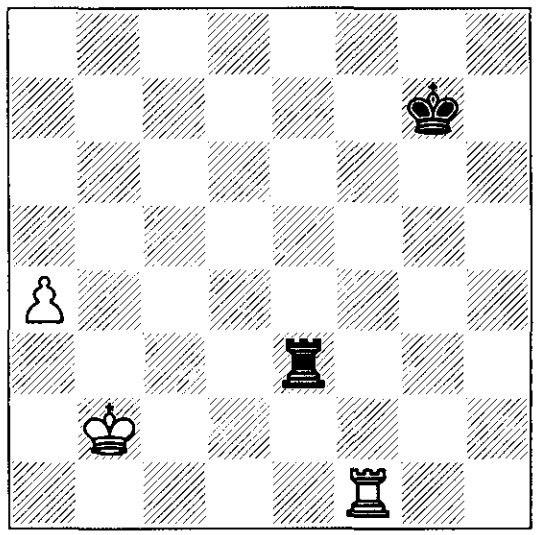
*Original*

**(131):** With White to move the position is a draw if Black's rook is on h3, g3 or f3, but with the rook on d3 White wins. With Black to move the position is drawn irrespective of the location of Black's rook.

**B♖g3:** 1 a5 ♖g5! 2 ♖a1 (2 a6 ♖b5+!) ♔e6 3 a6 ♖g8 4 ♔b3 ♔d6 5 ♔b4 ♔c7 with an easy draw.

**B♖d3:** 1 a5! ♖d5 (both 1...♖d8 2 ♔b3 and 1...♖h3 2 a6! ♖h8 3 ♔b3 win) 2 ♖a1! ♔e6 3 a6 ♖d8 4 ♔b3 ♖a8 (Black's king cannot move to the d-file) 5 ♔b4 ♔d6 6 ♔a5 with a win we have seen many times before in this section.

The results are the same if Black's king is on f6 instead of f7.



132 +/–

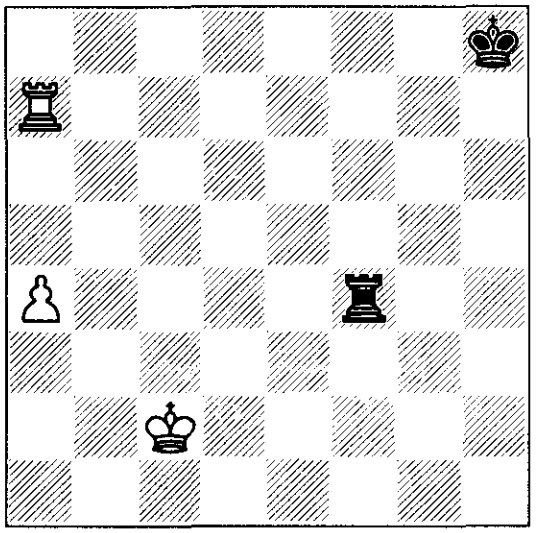
*Original*

**(132):** White wins wherever the black rook is on the third rank, even if it is Black to play. For example, in the above position Black has nothing better than 1...♖e2+ (after 1...♖e8 2 ♔b3 Black may switch his rook to the front of the pawn, but Black's king is too far away) 2 ♔b3 and White wins exactly as in diagram 128.

### 1.4.2: White's rook is in front of the pawn

This has less importance with the pawn on a4. The reason is that with White's pawn so far back, the typical situation with W♖a8 and ♙a4 against B♖a1 and B♔g7 offers very few winning prospects. Indeed, with Black to play it is a draw wherever White's king starts. White to play can only win if 1 a5 transposes into a winning position with the pawn on the fifth.

Even in the following extremely favourable position White is unable to win.

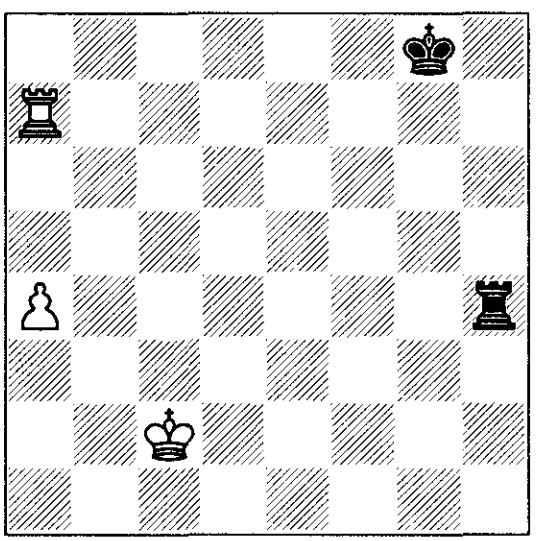


133 =/=

*Chéron, 1944*

**(133):** 1 ♔b3 (1 a5 ♖f5 2 a6 ♖f6 3 ♔c3 ♔g8 is a Vancura draw) ♖f3+! 2 ♔b4 ♖f4+! 3 ♔b5 ♖f5+! 4 ♔c6 ♖f6+ 5 ♔d5 ♖f4! 6 ♔e5 ♖c4 7 a5 ♖c5+ 8 ♔f6 ♔g8 9 a6 ♖c6+ with the usual Vancura draw.

However moving the rook from f4 to h4 proves too much of a disadvantage for Black, even when his king is on g8.



134 +/=

*Original*

**(134):** With White to play 1 ♔b3! and now:

1) **1...♔f8** 2 a5! ♖h1 3 ♖a8+! ♔g7 (3...♔f7 is met by 4 a6 ♔g7 5 ♔b4 with a Romanovsky win) 4 ♔b4 (4 a6? ♖h6! followed by ...♖f6 draws) ♖f1 (if Black checks on the first rank, White hides on a7) 5 ♖d8 and White frees his rook and wins.

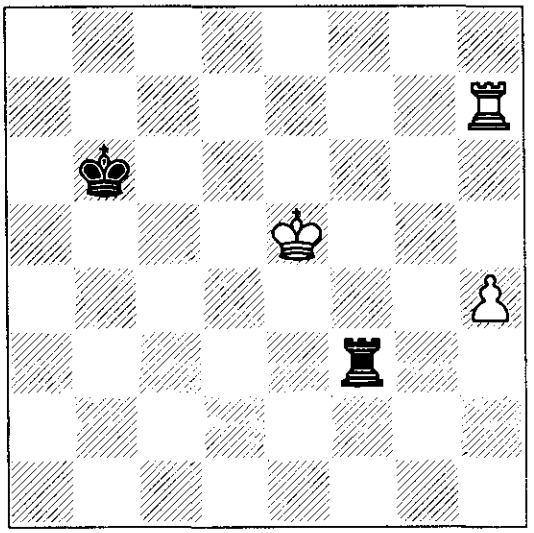
2) **1...♖h5** 2 ♖e7 ♖h3+ (if 2...♔f8, then 3 ♖e4 followed by ♔b4 and a5) 3 ♔b4 ♖h4+ 4 ♔b5 ♖h5+ 5 ♔b6 ♖h6+ 6 ♔b7 ♖h5 7 ♖c7 followed by ♔b6 and a5.

3) **1...♖h3+** 2 ♔b4! (2 ♔c4? ♔f8! 3 a5 ♔e8 4 a6 ♔d8 5 ♖g7 ♖a3! draws, so White's king must retain control of a3) ♖h4+ (now 2...♔f8 3 a5! wins) 3 ♔b5! (3 ♔c5? doesn't threaten to move the rook so Black has a tempo to improve his rook position by 3...♖f4, with a draw as in the previous diagram) ♖h5+ 4 ♔b6 ♖h6+ 5 ♔b7 ♖h7+ 6 ♔b8 ♖h4 (6...♖h5 loses to 7 ♖e7 ♖a5 8 ♖e4 followed by ♔b7-b6, but not 7 ♖d7? ♔f8! and the king comes too close) 7 a5! ♖h5 8 a6 ♖h6 9 ♖a8! ♖h7 (9...♔g7 10 ♔b7 ♖h1 11 ♖b8 wins) 10 ♔c8!, followed by ♖b8-b7, wins.

Black to play draws by 1...♖f4, amongst many other moves.

It follows that positions with the rook in front of the pawn are only interesting when Black's king is not in the safe zone near to g7. As so often, success usually depends on whether White can get his rook out from in front of the pawn. We examine a number of practical examples.

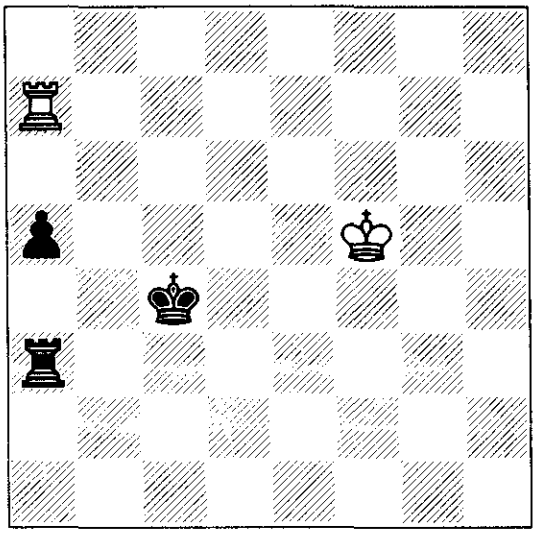
**(135):** The game continued 1...♔c6 2 h5! reaching diagram 111. Here we



135 /–

**Gelfand – King**

*European Team Ch, Haifa 1989*



136 =/+

**Brodsky – Neverov**

*Kherson, 1989*

will look at some alternative defences for Black:

1) **1...♖c3** 2 ♖d7! ♖h3 3 ♖d4 ♔c5 transposes to diagram 140 below.

2) **1...♖f1** 2 ♖d7! (2 h5? ♖c1! will either be a repetition after 3 ♖d7 ♖h1, or a Vancura draw after almost anything else, while after 2 ♔e6? Black draws by checking) ♖h1 3 ♖d4 and wins as in line 1. It is worth noting that 2 ♖g7? only draws after 2...♔c6 3 h5 ♖h1! 4 ♖h7 ♖e1+! 5 ♔f6 ♔d6! reaching diagram 108.

**(136):** In the game White was to move and play continued 1 ♔e4 a4 2 ♖c7+ ♔b4 (2...♔b3 3 ♔d3 ♔b2+ 4 ♔d2! ♖h3 5 ♖b7+ ♖b3 6 ♖c7! draws) 3 ♖b7+? (this careless check costs White the game; 3 ♔d4! ♖h3 4 ♖b7+! ♔a3 5 ♔c4 draws easily) ♔c3! 4 ♔e3 (making it easy; the main line runs 4 ♖a7 ♔b2 5 ♔d4 ♖h3 6 ♖b7+ ♖b3 7 ♖h7 ♖c3! 8 ♖b7+ ♔c2 followed by ...a3) ♔c2+! 5 ♔e2 ♖c3 6 ♖a7 a3 7 ♖a8 ♔b2 8 ♔d2 ♖b3 0-1.

The position is perhaps more interesting with Black to move. The choice lies between:

1) **1...a4?** (1...♔c3? 2 ♔e4! a4 is the same) 2 ♔e4! ♔c3 3 ♔e3! (we saw above that this position is lost with White's rook on b7; it is also lost with the rook on d7, as we shall see below) ♔c2+ 4 ♔e2! ♖a2 (threatening to win with ...a3) 5 ♖c7+! ♔b1+ 6 ♔d1 ♖h2 7 ♖b7+ ♖b2 8 ♖a7 ♖b4 9 ♔d2! ♔b2 10 ♖c7! with the draw of diagram 110.

2) **1...♖a1?** and now:

2a) **2 ♖c7+?** ♔d5 3 ♖d7+ ♔c6 4 ♖d2 (4 ♖a7 ♔b6 5 ♖a8 ♔b7 6 ♖e8 a4 7 ♖e7+ ♔c6 8 ♖e6+ ♔d7 9 ♖e3 a3 with a familiar win) ♖e1 5 ♖c2+ ♔b5 6 ♖b2+ ♔c4 7 ♖a2 ♔b4 8 ♖b2+ ♔a3 and the pawn advances.

2b) **2 ♔e5?** a4 3 ♖c7+ ♔b5 4 ♖a7 ♖d1 5 ♔e4 ♔b4! 6 ♖b7+ ♔c3 7 ♖c7+ ♔b2 8 ♖b7+ ♔a2 9 ♔e3 a3! 10 ♔e2 ♖b1! and wins.

2c) **2 ♔e4?** ♖e1+! (2...a4? 3 ♖c7+ ♔b5 4 ♔d3 draws) 3 ♔f3 ♔b5 4

♖b7+ ♔a6! 5 ♖b8 a4 and when White starts checking, Black hides on a2.

2d) **2 ♔f4!** a4 3 ♔e3! ♔c3 (3...a3 4 ♔d2!) 4 ♖c7+ and White draws.

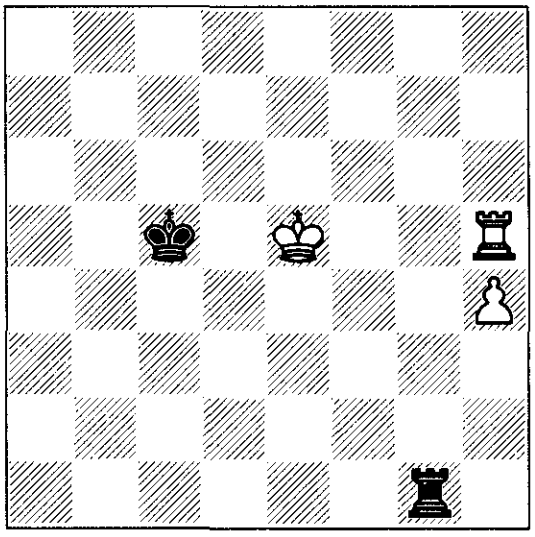
3) **1...♔d4** (threatening 2...a4) 2 ♖d7+ (2 ♔f4 a4!) ♔c3! 3 ♔e4 a4 4 ♔e3 (4 ♖a7 ♔b2 as above) ♔c2+! 5 ♔e2 ♖c3 (this is the move which isn't possible when White's rook is on a7) with a winning position. Even though 1...♔d4 appears paradoxical, the logic is that by threatening ...a4 Black forces White to check, but when White's rook has been deflected from the best square (a7) Black can win with ...♔c3. It happens that Black has a second, completely different, winning method:

4) **1...♔d5** 2 ♖d7+ (2 ♔f4 a4!) ♔c6! 3 ♖a7 (3 ♖e7 ♖a1 prevents a king move onto the e-file, threatens ...a4 and meets rook checks on the e-file by playing the king to d3) ♔b6 4 ♖a8 (4 ♖e7 ♖a1 as before) ♖e3! 5 ♔f4 ♖e7 6 ♔f3 ♔b5 7 ♖b8+ ♔c4 8 ♖c8+ ♔b3 9 ♖b8+ ♔a3 followed by ...a4 and the king and pawn shuffle down to a1 and a2 respectively, whereupon a rook tour to b1 wins.

It is curious that the only two winning moves, 1...♔d4 and 1...♔d5, both move Black's king away from the pawn. A fascinating position.

**(137):** In this case it is easy for White to bring his rook out from in front of the pawn, but he has to be careful to do it the right way. There are two main plans:

1) **1 ♖g5?** (the game continuation) ♖e1+! 2 ♔f6+ ♔d6! 3 h5 ♖f1+ 4 ♔g7 ♔e7! reaching the draw of diagram 110.



137 +/

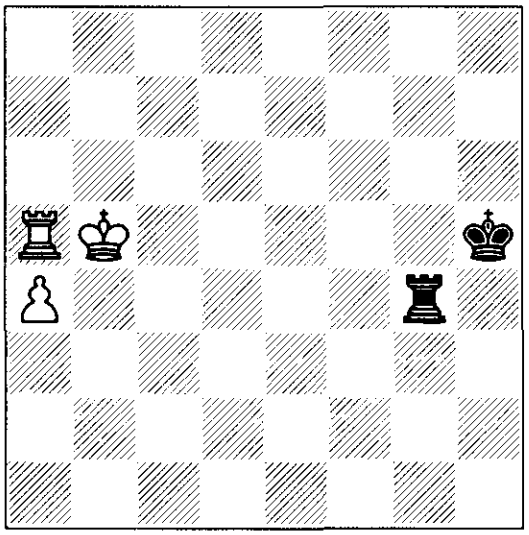
**L.Portisch – Farago**
*Hungarian Ch, 1965*

2) **1 ♖f5** wins, e.g. 1...♖e1+ 2 ♔f6+ ♔d6 3 h5! ♖h1 4 ♔g7 (4 ♔g6? ♔e7! draws) ♖g1+ (4...♔e7 5 ♖e5+! ♔d6 6 ♖g5! and 4...♔e6 5 ♖g5 also win for White) 5 ♔f7! ♖h1 6 ♖f6+ followed by h6 wins.

It is also possible to play 1 ♔f6+ ♔d6 2 ♖f5! ♔d7 3 ♔f7! followed by h5, with play similar to line 2. *ECE* recommends 1 ♔e6+ ♔d4 2 ♖g5, which maintains the win but makes it much more difficult. This is diagram 140 below.

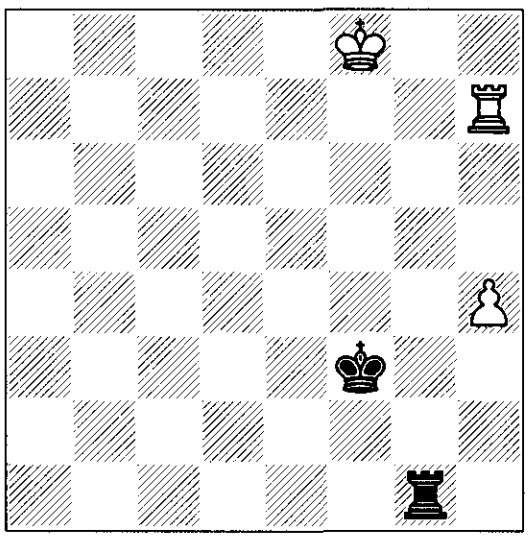
**(138):** This is diagram 112 moved down a rank. It is perhaps surprising that the reciprocal zugzwang still holds, even with the pawn on a4, but the analysis is very similar to that given before and readers should refer back. If we move Black's rook to f4 and king to g5 then, unlike the position one rank up, it is a draw whoever is to move.

To end this section, here is a position depending on a tactical point.



138 =/–

*Original*



139 +/=

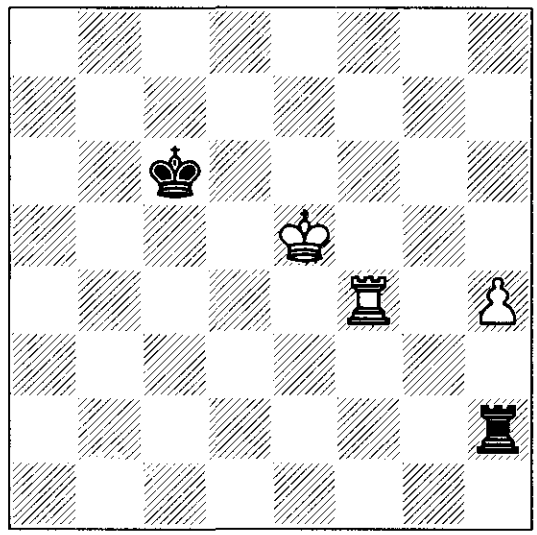
*Katsnelson, 1973*
*Special HM, Shakhmaty v SSSR*

**(139):** 1 h5! ♖a1 2 ♖f7+! (2 h6? ♖a8+! 3 ♔f7 ♔g4 draws) ♔g4 3 h6! ♔h5 (Katsnelson gave 3...♔g5, but this allows a simple win by 4 ♔g7 followed by h7) 4 h7! (not 4 ♔g7? ♖g1+! 5 ♔h7 ♖g5! 6 ♖f1 ♖a5 drawing) ♔g6 5 ♖g7+! ♔f6 (5...♔f5 6 ♖e7) 6 ♖a7! (6 ♖e7 ♖a8+! followed by the exchange of rooks) ♖xa7 (6...♖h1 7 ♖f7+ followed by ♔g8 wins) 7 h8♕+ ♔e6 and with accurate play White can win Black's rook in 27 moves.

## 1.4.3: Other situations

Firstly we look at some positions in which White's rook is defending the pawn from the side.

The following position is of enormous practical importance. The attractive manoeuvre by which White drives Black's king away from the pawn occurs time and time again.



140 +/=

**(140):** Black to play draws by 1...♔d7 2 ♔f6 ♔e8, amongst other methods, so we need only consider White to play. The winning line runs 1 ♖d4! (not 1 ♖e4? ♔d7! nor 1 ♔e6? ♖e2+! 2 ♔f7 ♖h2! and now both 3 ♖d4 ♔c5! and 3 ♖g4 ♔d6! lead to a draw) ♔c5 2 ♖e4 and now:

1) **2...♖h1** 3 ♔e6 (threat 4 ♖e5+ and 5 h5) ♔c6 4 ♖c4+ (this manoeuvre is typical and well worth knowing; Black's king is gradually driven to the a-file) ♔b5 5 ♔d5 ♖h2 6

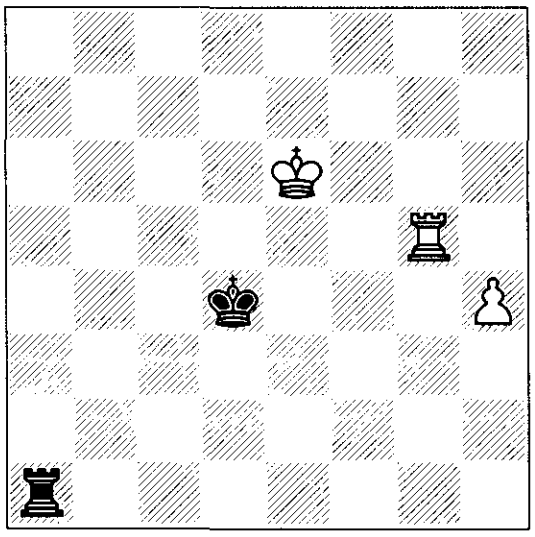
♖d4 (the same again) ♖h1 7 ♔d6 ♔b6 8 ♖b4+ ♔a5 9 ♔c5 and now:

1a) **9...♖h2** 10 ♖c4 ♔a6 (after 10...♖h1 11 ♔c6 Black can't prevent ♖c5+ and h5) 11 ♔c6 ♔a7 12 ♖b4 ♖h1 13 ♔d6 (Black must spend two moves attacking White's rook and this extra tempo enables White to win by returning to the kingside) ♔a6 14 ♔e6 ♔a5 15 ♖g4 (other squares are bad as White's king needs to be shielded from checks after ♔g6) ♔b6 16 ♔f6 ♔c5 (16...♔c6 17 ♔g6! ♖d1 18 h5 ♖d6+ 19 ♔g5 ♖d5+ 20 ♔h4 ♖d1 21 h6 ♔d7 22 ♔g5 1-0, Eingorn-Panczyk, Polanica Zdroj 1984) 17 ♔g6 (17 ♖g5+? ♔d6! 18 h5 ♖f1+! 19 ♔g7 ♔e7! is the draw of diagram 110) ♔d6 18 h5! ♖e1 19 h6! ♖e6+ 20 ♔h5 wins.

1b) **9...♔a6** 10 ♔c6 ♖c1+ (10...♔a5 11 ♖b5+ and h5 wins, while 10...♔a7 11 ♔d6 transposes to line 1a) 11 ♔d6 ♖c2 (11...♖h1 is again line 1a) 12 ♔e6 ♖c5 13 ♔f6 ♔a5 (13...♖c6+ 14 ♔g5 ♖c5+ 15 ♔g4 doesn't help) 14 ♖f4 ♔b6 15 ♔g6 ♖c1 16 h5 ♖g1+ 17 ♔f7 ♔c7 (17...♖h1 18 ♖f6+) 18 ♖f6 (or 18 h6) ♔d7 19 h6 ♖h1 20 ♔g7 ♔e7 21 ♖g6 ♖f1 22 h7 ♖f7+ 23 ♔h6 1-0, Gligorić-Petrosian, match Yugoslavia-USSR 1957.

2) **2...♖a2** 3 ♔e6 ♖a6+ (3...♖h2 4 ♖e5+ and h5) 4 ♔f5 ♖a1 5 h5 ♔d6 (5...♖f1+ 6 ♔e6 ♖h1 7 ♖e5+! ♔d4 8 ♔f6 wins) 6 h6! ♖f1+ 7 ♔g5 ♖h1 8 ♖h4 ♖g1+ 9 ♖g4 (9 ♔h5 was slightly faster) 1-0, Ciocaltea-Van der Wiel, Bochum 1981.

(**141**): Black to play draws easily by 1...♔e4 2 h5 ♔f4. With White to play the win is quite tricky:



141 +/=

*Original*

**1 ♔f5!**

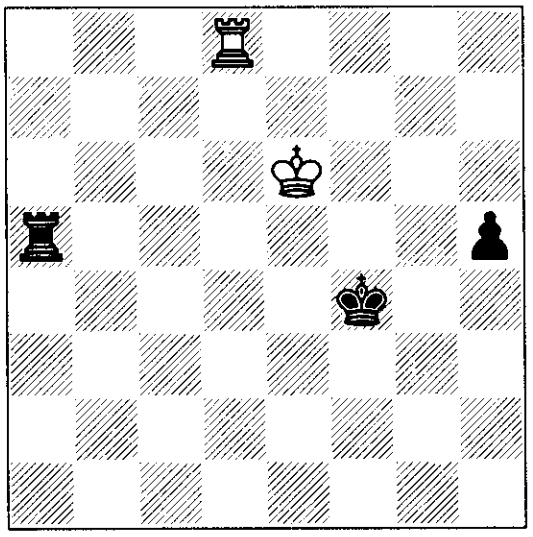
The only move. 1 h5? (1 ♖g4+? ♔e3! is similar) ♔e4! 2 ♖g4+ ♔f3! 3 ♖g6 ♔f4 4 h6 ♖a6+ 5 ♔f7 ♖a7+! 6 ♔f6 allows a draw by 6...♖h7 (diagram 75 with White to move) or 6...♖a6+.

**1 ... ♔e3**

Or 1...♖a5+ (1...♖f1+ 2 ♔g6 is simple) 2 ♔f4 ♖a1 3 ♖f5 (3 h5? ♖f1+! draws) followed by h5, and White wins.

**2 h5! ♖a5+** (2...♖a6 3 ♖g7 ♖a5+ 4 ♔g4 ♖a4+ 5 ♔g3 ♖a6 6 ♖e7+ ♔d4 7 ♔g4 ♔d5 8 ♔g5 ♔d6 9 ♖b7 ♔c6 10 ♖f7 wins) **3 ♔g4! ♖a4+ 4 ♔g3! ♖a1 5 ♖e5+! ♔d4 6 ♖e8!** (6 ♖e7? ♖h1 7 ♔g4 ♔d5! 8 ♔g5 ♔d6! 9 ♖e4 ♖g1+ and White's king has to hide on the h-file, but we know from diagram 30 that Black's king is close enough to draw) **♖h1 7 ♔g4! ♔d5** (with the rook on e8, White has a free move here with

which to threaten h6) **8 ♔g5! ♖g1+** (Black has to start checking now, or else White wins with h6) **9 ♔f5 ♖f1+ 10 ♔g6 ♖g1+ 11 ♔h7 ♔d6 12 h6! ♔d7 13 ♖g8!** and wins.

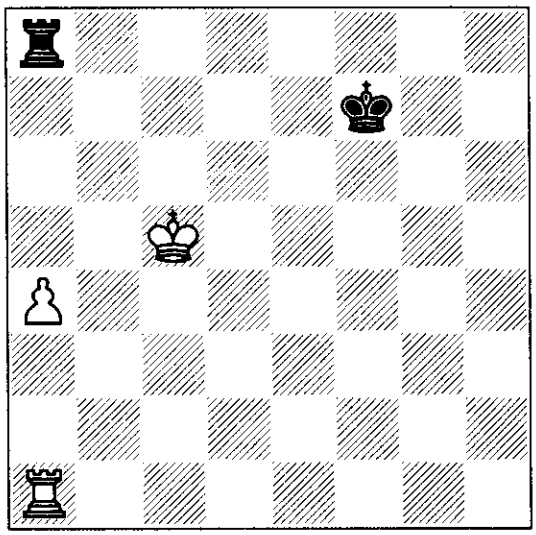


142 –/

**Vidmar – Bogoljubow**
*Nauheim 1936*

(**142**): 1 ♖f8+ (1 ♖d4+ ♔g5! 2 ♖d1 h4 wins, but not 1...♔g3? 2 ♔f6! h4 3 ♖d3+! ♔g4 4 ♖d4+! ♔h5 5 ♖d3! and White draws) ♔g4 2 ♖g8+ (in the game White chose 2 ♖b8 h4 3 ♖b4+ ♔g5 4 ♖b3 ♖f5 5 ♖b8 ♔g4 6 ♖b1 ♖f2 7 ♔e5 h3 8 ♔e4 h2 9 ♔e3 ♖f3+ 10 ♔e2 ♖h3 0-1) ♔h3 3 ♔f6 (3 ♖b8 h4 and if White starts checking Black's king hides on g6) h4! 4 ♖b8 (now the sideways checks are a serious threat) ♖a3! (4...♖a4? and 4...♖a2? fail to 5 ♔g5! threatening ♖b3+) 5 ♖g8 (5 ♔g5 ♔g3) ♔h2 6 ♔f5 ♖a4! (6...h3? 7 ♔f4! draws) 7 ♖b8 h3! 8 ♖b3 (8 ♔g5 seals off the hiding square on h4, but allows 8...♖e4 preparing to interpose on the e-file) ♔g2! 9 ♖b2+ ♔g3! 10 ♖b3+ ♔h4! 11 ♖b2 ♖g4 12 ♖a2 ♖g2 13 ♖a4+ ♔h5 followed by ...♖f2+ and ...h2 wins.

The remaining positions fall into no particular category.



143 +/=

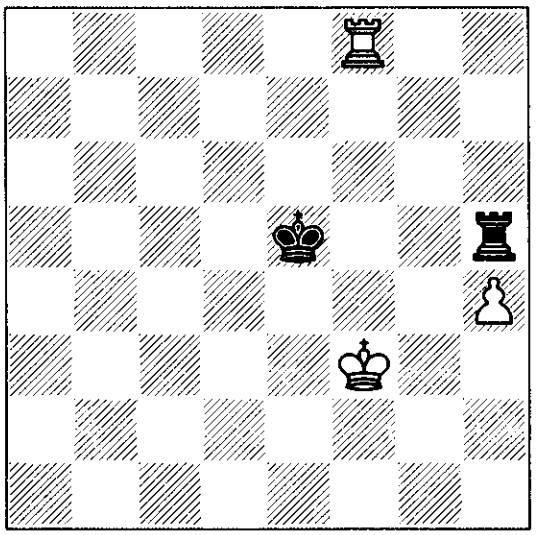
*ECE, 1985*

(**143**): White to play wins easily with 1 a5. Black to move can draw by means of accurate play: 1...♔e7 and now:

1) **2 ♔c6** ♖c8+ 3 ♔b7 ♖c2! 4 a5 ♖b2+ 5 ♔c6 ♖c2+! 6 ♔b5 ♖b2+ 7 ♔c4 (if Black had played 3...♖c3? then White would now gain a decisive tempo) ♔d7 8 a6 ♖c2+! (White's king must be checked one square further back) 9 ♔b3 ♖c8! and draws.

2) **2 ♔b6** (2 a5 ♔d7 3 ♔b6 ♖b8+!) ♔d7 3 ♔b7 ♖a5! 4 ♖d1+ ♔e6 5 ♖d4 ♔e5 6 ♖h4 ♔d6 7 ♔b6 ♖a8! 8 ♖h6+ (8 ♖d4+ ♔e5!) ♔d7! 9 ♖h7+ ♔d6! 10 a5 ♖b8+! 11 ♖b7 ♖h8 12 a6 ♖h1 draws.

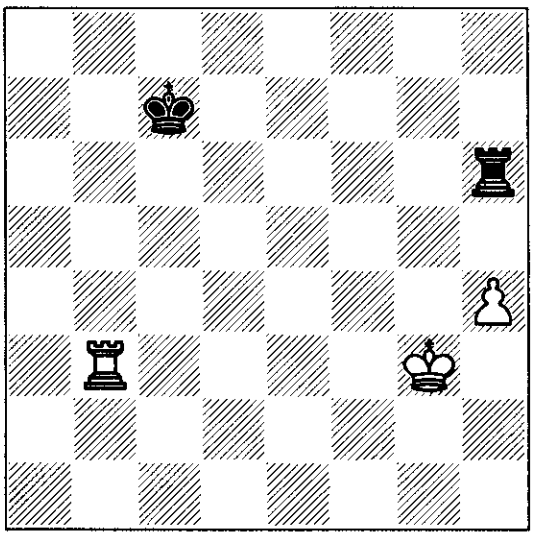
(**144**): 1 ♔g4 ♖h7! (not 1...♖h6? 2 ♔g5 followed by h6 and wins) 2 h5 ♔e6 (2...♖g7+ 3 ♔h4 ♖g1 is also a draw) 3 ♔g5 ♔e7? (a terrible error,



144 =/

**Timman – Marjanović**
*Belgrade 1987*

because Black had a simple draw by 3...♖g7+ and now 4 ♔h4 ♖g1 or 4 ♔h6 ♖g1 5 ♔h7 ♔e7 6 ♖g8 ♖h1; 3...♖f7 also draws, but in a more complex fashion) 4 ♖a8 (Black's king is trapped on a bad square) ♖g7+ 5 ♔f5! ♔f7 (5...♖f7+ 6 ♔e5 followed by h6 is also lost) 6 h6! ♖h7 7 ♔g5 1-0.



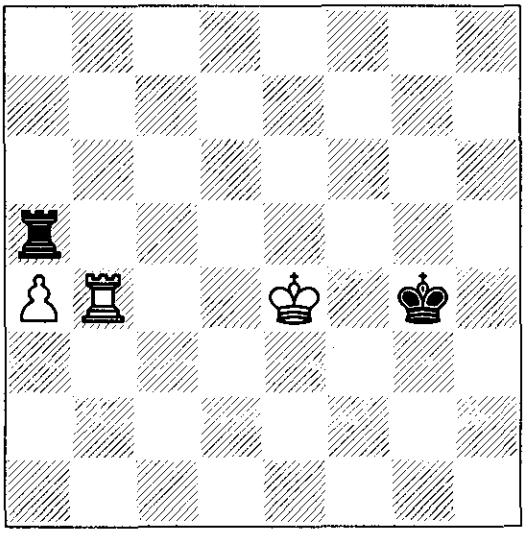
145 =/

**Emms – Barry**
*Dublin, 1991*

**(145):** The important point about this ending is that if White gets his pawn to h5 Black will have to defend by bringing his rook to g1, checking White's king in front of the pawn. The resulting position is drawn if Black's king is cut off by a rook on the e-file, but lost if the rook is on the d-file. In other words, if White can play both ♖d3 and h5 then he wins. Therefore playing ...♔d7 is a priority for Black, while ♖d3 is a priority for White. However we know that the immediate 1 ♖d3 ♖h8 is drawn from diagram 121, and in this position Black can play even more simply by 1...♖d6.

The game continued 1 ♔g4 ♖a6? (1...♔d7! 2 ♔g5 ♖a6 draws after 3 h5 ♔e7 4 ♖f3 ♖a1 or 3 ♖e3 ♖a1 4 h5 ♖g1+! and White's king will have to go in front of the pawn, so Black reaches his target drawn position) 2 ♔g5? (2 h5 ♔d7 3 ♖e3! was the fastest win since Black cannot prevent the pawn's advance to h6) ♖a5+? (2...♔d7! transposes to the analysis of 1...♔d7!) 3 ♔g6! ♖a6+ 4 ♔g7! ♖a1 and now the game finished 5 ♖h3? ♖g1+ 6 ♔h6 ♔d6 7 ♖e3 ♖h1 8 h5 ½-½, as Black's king is close enough. However 5 ♖d3! would have won after 5...♖h1 (on 5...♖g1+ 6 ♔h6 the king and pawn advance, while 5...♖a5 6 ♖h3 ♔d7 7 h5! wins) 6 ♖d4! (threat ♔g6 and h5) ♔c6 7 ♔g6! (7 ♔h6? ♔c5! draws by forcing the rook off the d-file) ♔c5 (after 7...♖g1+ 8 ♔h6 ♔c5 9 ♖d8 White keeps the king cut off) 8 ♖g4! ♔d6 9 h5! followed by h6 and wins.

**(146):** With Black to play White wins:



146 =/–

*Original*

1) **1...♖a6** (1...♖a8 2 ♔d5+ ♔f5 3 ♔c6 transposes) 2 ♔d5+ ♔f5 3 ♔c5 ♔e5 (3...♖a8 4 ♔c6! ♔e5 5 ♖h4 is the same) 4 ♖h4 (White improves his rook position while keeping Black's king away) ♖a8 5 ♔c6! (not 5 ♔b6? ♔d6!) ♖c8+ (5...♔e6 6 ♖e4+! ♔f5 7 ♔b7! ♖h8 8 ♖c4 ♖h7+ 9 ♔b6 ♖h1 10 a5 wins) 6 ♔b7! ♖c1 7 ♖h6! (White must arrange a shield for his king before he pushes the pawn) ♖b1+ 8 ♖b6 ♖h1 9 a5! ♖h7+ 10 ♔c6! ♔d4 11 ♖b7 ♖h6+ 12 ♔b5! ♖h5+ 13 ♔b4! wins.

2) **1...♖f5** (1...♖g5 2 ♖b5) 2 ♔d3+! ♔f3 3 ♖b5 ♖f4 4 a5! ♖a4 5 ♔c3 ♔e3 6 ♔b3 ♖a1 7 ♔c4 and White is winning.

3) **1...♔g3** 2 ♔d3 ♔f3 3 ♔c3 ♔e3 4 ♖h4 ♖a8 5 ♔b4 ♖b8+ 6 ♔c5 ♖c8+ 7 ♔b6 ♖b8+ 8 ♔c7 ♖a8 (or else a5) 9 ♔b7 ♖a5 10 ♔b6 ♖g5 11 a5 ♖g6+ 12 ♔b5 ♖g5+ 13 ♔b4 ♖g6 14 ♖c4, followed by ♔b5 and a6, advancing the pawn and winning.

White to play has only one reasonable move, 1 ♖d4 (1 ♖c4 is met by 1...♔g5 followed by ...♔f6), but then 1...♖c5!, reaching a second reciprocal zugzwang, saves the day as a rook move along the d-file allows 2...♖c4+ and repetition.

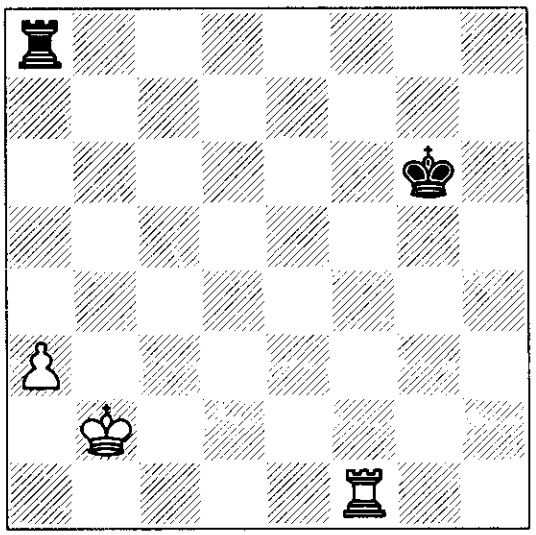
Diagrams 138, 146 and the position mentioned just above are the only reciprocal zugzwangs with ♖+♙a4 v ♖.

**Practical tips:** Over-the-board players should know that the winning 'cut-off' distance for ♖+♙a4 v ♖ is five files. Being aware of the winning manoeuvre in diagram 140 could also be very useful. The rest of the analysis shows how tricky this ending can be; unfortunately it is impossible to distil this complexity into a set of easily-remembered rules.

## 1.5: Pawn on the third rank

There is no longer any point in attempting a classification, because even relatively simple positions contain several ideas. Chéron is the only analyst to have conducted serious investigations in this ending, and he only examined the basic positions in which Black's king is cut off along a file. We deal with these first.

**(147):** With the pawn on the third rank even five files is insufficient distance for White to win. After 1 ♔b3 ♖b8+! (if Black's king is on g7 then he can also draw with 1...♖f8) 2 ♔c4



147 =/=

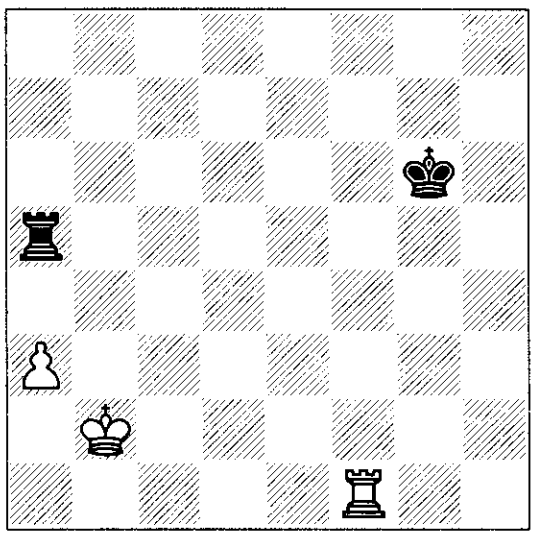
*Chéron, 1923*

Black must, however, defend accurately:

1) **2...♖c8+?** 3 ♔b5! ♖b8+ 4 ♔c6! ♖a8 (4...♖c8+ 5 ♔b6 ♖b8+ 6 ♔a7! ♖b5 7 ♔a6! ♖e5 8 a4 ♖e6+ 9 ♔b5 ♖e5+ 10 ♔c6 ♖e6+ 11 ♔d5 wins since both 11...♖e2 and 11...♖a6 may be met by 12 ♖a1) 5 ♖a1! ♖c8+ 6 ♔b7 ♖c2 (6...♖f8 7 a4 also wins) 7 a4! ♖b2+ 8 ♔c6 ♖c2+ 9 ♔b5 ♖b2+ 10 ♔c4 ♖c2+ 11 ♔b3 ♖c8 12 a5 and Black's king is too far away.

2) **2...♖a8!** 3 ♔b4 (3 ♖f3 ♖c8+ 4 ♔b5 ♖b8+! 5 ♔c6 ♖a8! draws because White's rook is no longer able to switch behind the pawn) ♖b8+! 4 ♔c5 ♖a8! 5 ♖a1 (the only winning try, but it makes a big difference that White's king is on c5 instead of c6) ♔f6 6 a4 ♔e6 7 ♔c6 (7 a5 ♔d7! draws, or 7 ♔b6 ♖b8+ 8 ♔c7 ♖b2!) ♖c8+! 8 ♔b7 ♖c2! (but not 8...♖c3? 9 a5! because White's king does not have to retreat so far when Black starts checking) 9 a5 and Black starts checking, forcing the king back to the third rank, after which Black's rook returns to the eighth rank and White's king is too far away.

As before White can win such positions if Black's pieces are badly placed. However, moving Black's rook to a7, a6 or a5 doesn't change the result because then Black can meet 1 ♔b3 by playing his rook to the f-file. The next position makes this idea clear.



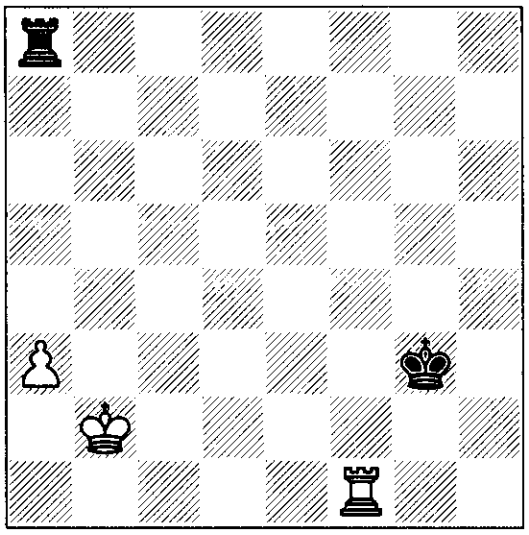
148 =/=

*Chéron, 1923*

**(148):** 1 ♔b3 ♖f5! 2 ♖e1 ♔f6 3 ♔b4 (3 a4 ♖e5! 4 ♖d1 ♔e6 5 ♔b4 ♖e2 6 a5 ♖b2+ 7 ♔a3 ♖b7 8 ♔a4 ♖d7 draws) ♖f4+! 4 ♔b5 (4 ♔c5 ♖a4 draws after 5 ♖a1 ♔e6 6 ♔b5 ♖a8 or 5 ♖e3 ♖a8 6 ♔c6 ♔f7 7 ♔b7 ♖a4) ♖f5+! 5 ♔b6 ♖f4! 6 ♖a1 ♔e7 7 a4 ♔d7 and Black is in time.

If we keep the rook on a8 and move Black's king down the g-file then the result doesn't change if the king is moved to g5 or g4. The reason is that play proceeds exactly as in line 2 of diagram 147, with Black playing his king to e6 in two moves. However,

with the king on g3 Black cannot reach e6 in two moves and White wins.



149 +/=

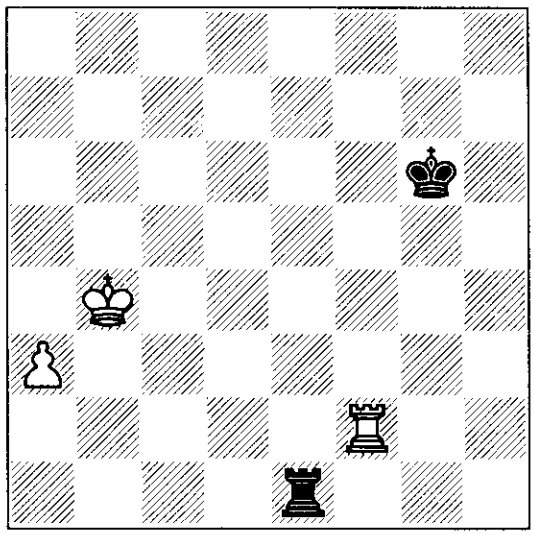
*Original*

**(149):** The above comments show that Black to move can draw with 1...♔g4!. White to play wins by 1 ♔b3! ♖b8+ 2 ♔c4 ♖a8 3 ♔b4! ♖b8+ 4 ♔c5! and now:

1) **4...♖a8** 5 ♖a1! ♔f4 6 a4! ♖c8+ (6...♔e5 7 a5 is hopeless) 7 ♔b6 ♖b8+ 8 ♔c7 ♖b2 9 a5 wins easily.

2) **4...♖c8+** 5 ♔b5 ♖b8+ 6 ♔c6 ♖c8+ (6...♖a8 7 ♖a1! wins as above) 7 ♔b7 ♖c2 8 ♖f6 (with Black's king on g6, White wins by playing a4, but here 8 a4 simply loses the pawn after 8...♖a2 because f4 is covered) ♖a2 9 ♖a6! ♖b2+ 10 ♔c6! ♖c2+ (10...♖f2 11 a4 ♖f6+ 12 ♔b5 ♖f5+ 13 ♔c4 ♖f4+ 14 ♔d5 ♔g4 15 a5 wins) 11 ♔b5 ♖b2+ 12 ♔a5 ♔f4 13 ♖e6! ♔f5 14 ♖e1 ♖b8 15 a4! ♔f6 16 ♔a6 ♖a8+ (Black must do something or else White reaches a position with ♔a8 and ♙a7, when Black's king is far enough away for White to win) 17 ♔b5! ♖b8+ 18 ♔c6 (we know this is a win from diagram 121) ♖c8+ (18...♖b2 19 a5 ♖c2+ 20 ♔b6 eventually reaches diagram 2) 19 ♔d7 ♖a8 20 ♖a1 ♖a5 21 ♔c6 wins.

Interesting play can arise when Black uses his rook to defend by lateral checks.



150 +/–

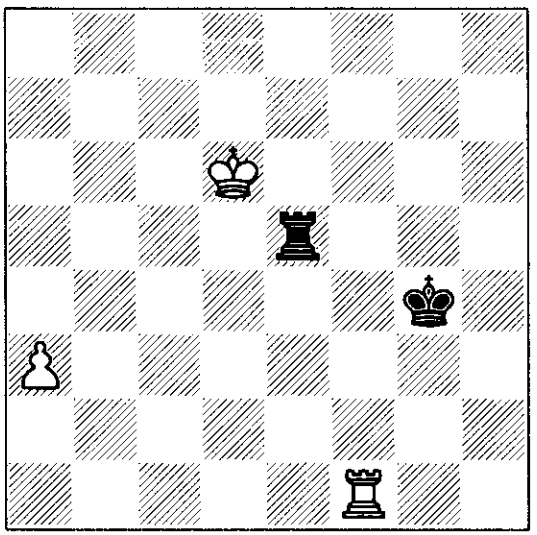
*ECE, 1985*

**(150):** *ECE* claimed a draw with Black to move. In fact White can win by 1...♖e4+ (1...♖b1+ 2 ♔a5 ♖b8 3 a4! ♖a8+ 4 ♔b5 ♖b8+ 5 ♔c6 ♖a8 6 ♖a2 wins) and now:

1) **2 ♔c5?** (the only move considered by *ECE*, this does indeed lead to a draw...) ♖a4 (...but not by *ECE*'s move 2...♖e5+?, when White has the chance to retrace his steps by 3 ♔c4 ♖e4+ 4 ♔b3) 3 ♖f3 (3 ♖a2 ♔f6! draws as in diagram 147) ♖a8! and Black starts checking from the front, which, as we already know, leads to a draw when Black's king is on the g-file.

2) **2 ♔b3!** ♖e3+ 3 ♔b2 ♖e4 (we know from diagram 132 that White

wins if he can play a4) 4 ♖f3! (with the simple threat of ♔b3 and a4) ♔g5 (Black's king is too far away) 5 ♔b3! ♔g4 6 ♖f1 ♖e3+ 7 ♔b4 ♖e4+ 8 ♔b5 ♖e5+ 9 ♔b6 ♖e6+ 10 ♔c5 ♖e5+ 11 ♔d6 *(D)* and now:

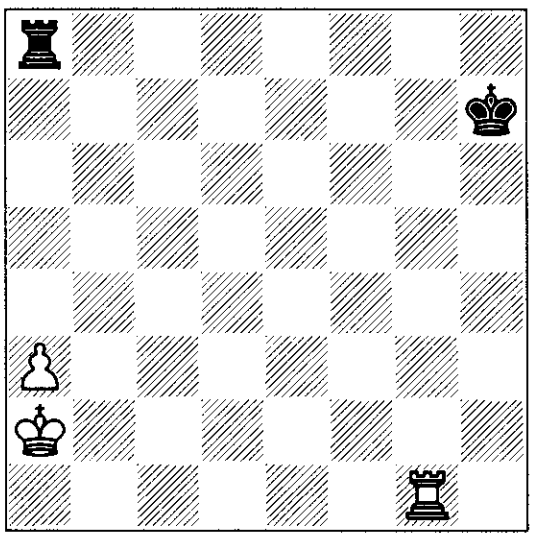


150a +/–

2a) **11...♖a5** 12 ♖a1! ♔f3 (Black lacks one tempo to set up a draw with 12...♖a4 13 ♔c5 ♔f5 14 ♔b5 ♖e4 – his king needs to be on f6 for this to work) 13 ♔c6! (13 a4? ♔e3 14 ♔c6 ♔d2! is the draw of diagram 155 below) ♔e2 14 ♔b6! ♖a4 (14...♖h5 15 ♖c1! is similar) 15 ♔b5! ♖h4 16 ♖c1! (a fantastic move; after 16 a4? ♔d2! we are back in diagram 155) ♖h8 17 ♖c6 (once again, White must take time out to shield his king; the immediate 17 a4? ♖b8+ leads to a draw) ♖h1 (still trying to find a way to harass White's king) 18 ♖c4 (shielding again) ♖h8 19 a4 (this move wins now that White has improved the position of his rook) ♖b8+ 20 ♔c5 ♖c8+ 21 ♔b4 ♖b8+ 22 ♔c3 ♖a8 23 ♖h4 ♔e3 24 ♔b4 ♖b8+ 25 ♔c5 ♖a8 26 ♔b5 ♖b8+ 27 ♔a6 followed by a5 with an easy win.

2b) **11...♖e2** 12 ♖c1 (or 12 ♖a1? ♔f5! 13 a4 ♖d2+! and draws by checking on the second rank) ♖a2 13 ♖c4+! (exploiting Black's bad king location to reach a winning position with the pawn on a4) ♔f5 14 a4! with a win as in diagram 140.

With the black king one file further away White wins whatever the disposition of Black's pieces.



151 +/–

*Chéron, 1923*

**(151):** With Black to move:

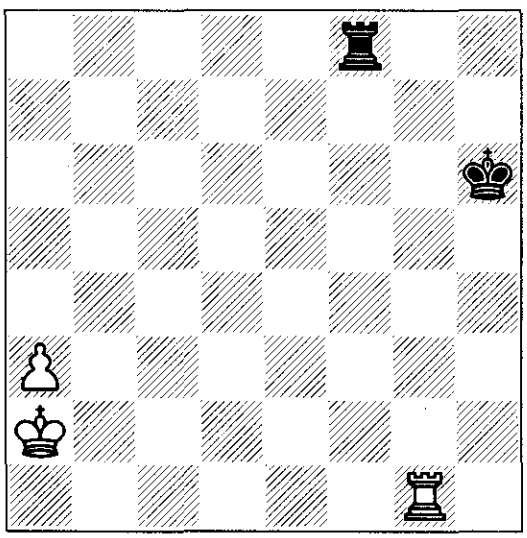
1) **1...♖f8** (attempting to attack from the side) 2 a4 ♖f4 (2...♖f3 3 ♖a1 ♖f2+ 4 ♔b3 wins comfortably) 3 ♔b3 ♖f3+ 4 ♔b4 ♖f4+ 5 ♔b5 ♖f5+ 6 ♔b6 ♖f6+ 7 ♔c5 ♖f5+ 8 ♔d6 ♖f6+ 9 ♔e5 ♖a6 (9...♖f2 10 ♖a1 is similar) 10 ♖a1 ♖a5+ (10...♔g7 11 a5 ♔f7 12 ♔d5 ♔e7 13 ♔c5 ♔d7 14 ♔b5! ♖a8 15 a6! wins) 11 ♔d6 ♔g7 12 ♔c6 ♔f8 13 ♔b6 ♖e5 (or 13...♖f5 14 a5 ♖f6+ 15 ♔b7 ♖f7+ 16 ♔b8 and wins) 14 a5 ♖e6+ 15 ♔c5 winning.

2) **1...♔h6** 2 ♔b3 ♖b8+ 3 ♔c4 ♖c8+ (3...♖a8 4 ♖a1 is losing now that the black king is one square further away) 4 ♔b4 ♖b8+ 5 ♔c5 ♖c8+ 6 ♔b6 and now:

2a) **6...♖a8** 7 ♖a1 ♖a4 8 ♔b5 ♖g4 9 a4 ♖g5+ 10 ♔c4 ♖g4+ 11 ♔d3 ♖g3+ 12 ♔e4 ♖g4+ 13 ♔e3 (not 13 ♔f3? ♔g5! 14 a5 ♔f5! 15 a6 ♖g8! drawing) ♖g6 (13...♖g3+ 14 ♔f2 is easy because 14...♖g6 loses to ♖h1+ and ♖g1) 14 a5 ♖a6 15 ♔d4 wins.

2b) **6...♖b8+** 7 ♔a7 ♖b5 (7...♖b3 8 a4! ♖a3 9 ♖g4! ♔h5 10 ♖b4 ♔g6 11 ♔b6 and the pawn advances) 8 ♖a1 ♖a5+ 9 ♔b6 ♖a4 10 ♔b5 ♖g4 11 a4 as in line 2a.

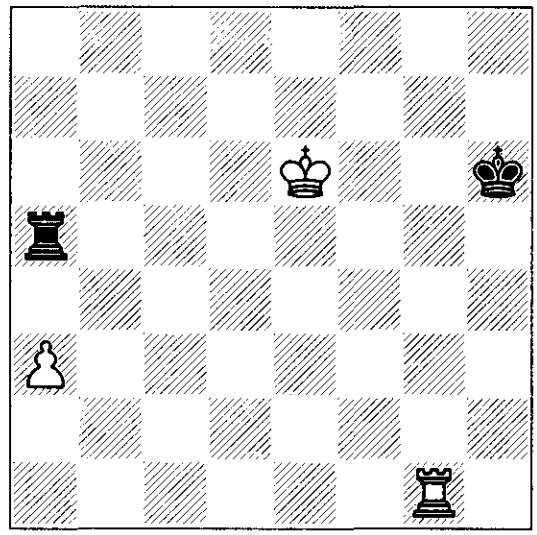
However, Black to play can sometimes draw if he is able to start his attack from the side while the pawn is still on the third rank. Whether he succeeds or not depends on the position of Black's king.



152 +/=

*Chéron, 1923*

**(152):** White to play wins as in line 1 above. With Black to play we have: 1...♖f2+! 2 ♔b3 ♖f3+! 3 ♔b4 ♖f4+! 4 ♔b5 ♖f5+! 5 ♔c6 ♖f6+! 6 ♔d5 ♖f5+! 7 ♔e6 (after 7 ♔e4 ♖a5 the line 8 ♖a1 ♔g6 9 a4 ♔f6 10 ♔d4 ♔e6 11 ♔c4 ♔d6 12 ♔b4 ♖a8 draws easily, while 8 ♖g3 ♖a8 9 ♔d4 ♔h5! 10 ♔c5 ♔h4! 11 ♖d3 ♔g5 12 ♔b5 ♔f6 13 a4 ♔e7! 14 a5 ♖d8! is also drawn) ♖a5! *(D)* (it is interesting to note that 7...♖f4? loses; see diagram 156 below) and now:



152a =/=

1) **8 ♖a1** ♖a4 (we take 8...♖a4 as the main line because Chéron analysed this move; 8...♔g5 is also drawing and we analyse this in diagram 155 below) 9 ♔d5 ♔g6 10 ♔c5 and now:

1a) **10...♔f7?** 11 ♔b5! ♖e4 12 a4! ♖e5+ 13 ♔c4 ♖a5 (the difference between this line and line 1c is that after 13...♖e4+ 14 ♔d5 Black has no check on e5) 14 ♔b4! ♖a8 15 a5 and wins.

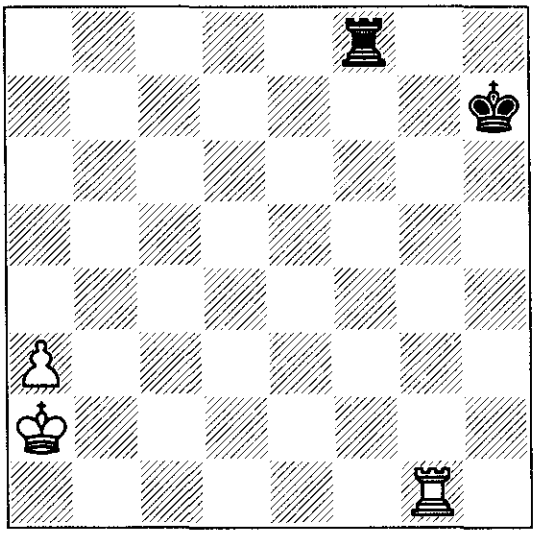
1b) **10...♔f5?** 11 ♔b5! ♖e4 12 a4! ♖e5+ 13 ♔c6 ♖e6+ 14 ♔c7 ♖e7+ 15 ♔c8 ♖e8+ 16 ♔d7 ♖a8 17 a5 wins.

1c) 10...♔f6! 11 ♔b5 ♖e4! (playing 11...♖g4? fails because White's king can shelter on the 6th rank, while

11...♖a8? 12 a4! wins after 12...♖b8+ 13 ♔c6! ♖c8+ 14 ♔b7 or 12...♔e7 13 a5!) 12 a4 ♖e5+! 13 ♔c4 ♖e4+! 14 ♔c5 ♖e5+! 15 ♔d6 (15 ♔d4 ♔e6 16 a5 ♔d6! 17 a6 ♖e8! draws) ♖e6+! 16 ♔d7 ♖e7+! 17 ♔d8 ♖h7 18 a5 ♔e6 followed by ...♔d6 with an easy draw.

2) **8 ♖g3** ♔h5 9 ♔d6 ♔h4 10 ♖c3 (10 ♖d3 ♔g4! 11 ♔c6 ♔f4! 12 ♔b6 ♖a8! is similar) ♔g4 11 ♔c6 ♔f4 12 ♔b6 ♖a8 13 ♖c4+ ♔e5! 14 a4 ♔d6 15 a5 ♖b8+! draws.

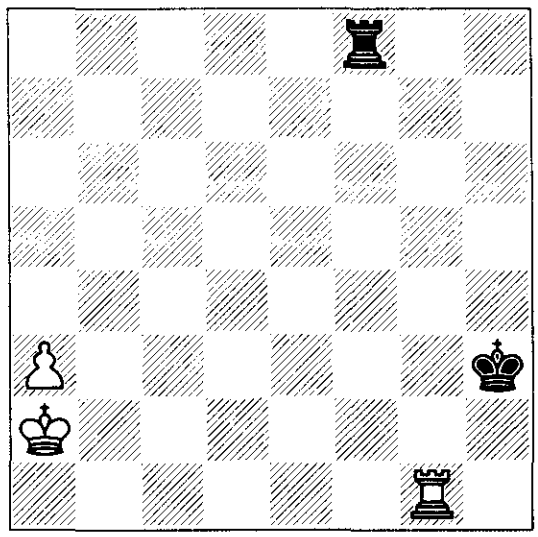
The result is the same if Black's king is on h5 or h4. However, with the king on h3 or h7, Black to play loses.



153 +/–

*Original*

**(153):** We need only take Black to play. 1...♖f2+ 2 ♔b3! ♖f3+ 3 ♔b4 ♖f4+ 4 ♔c5 ♖f5+ 5 ♔d6 ♖f6+ 6 ♔e5 ♖a6 7 ♖g3! (7 ♖a1 ♖a4 draws just as in the previous diagram) ♔h6 (Black is one tempo further away from kicking the rook off the g-file and this costs him the game) 8 ♔d5 ♔h5 9 ♔c4 ♖a8 (9...♔h4 10 ♔b5 ♖a8 11 ♖d3 wins after 11...♖b8+ 12 ♔c6 ♖a8 13 ♖d4+ and 14 a4) 10 ♔b3! ♖b8+ 11 ♔a2 ♖a8 12 ♖g1 and White wins as in diagram 151.



154 +/–

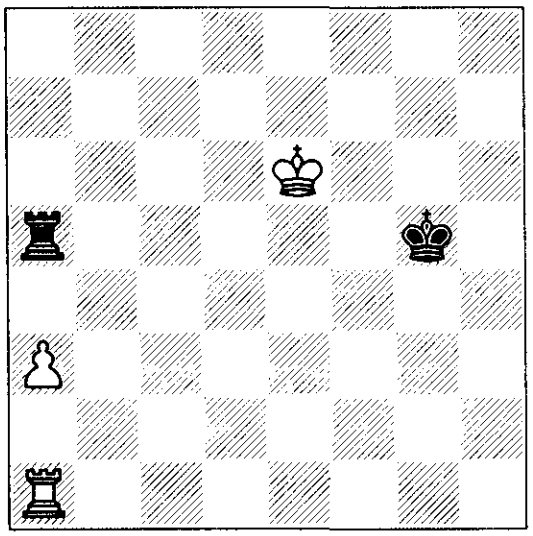
*Original*

**(154):** 1...♖f2+ 2 ♔b3! ♖f3+ 3 ♔b4 ♖f4+ 4 ♔c5 ♖f5+ 5 ♔d6 ♖f6+ 6 ♔e5 ♖a6 7 ♖a1! ♖a4 8 ♔d5 ♔g4 9 ♔c5 ♔f5 10 ♔b5! and we have transposed into line 1b of diagram 152.

We continue with two interesting positions which might arise from diagram 152.

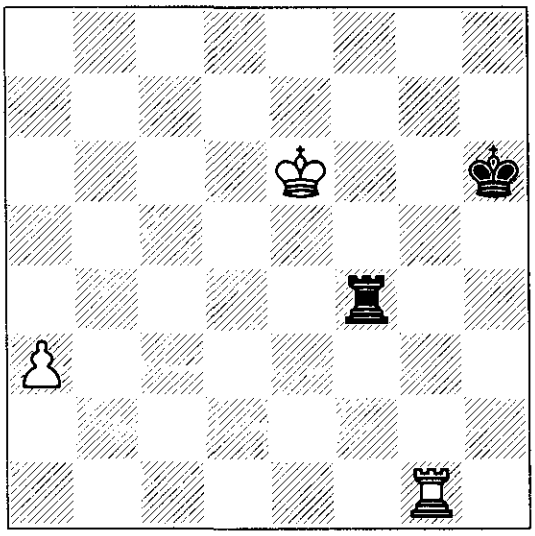
**(155):** We take White to move. After 1 a4 (1 ♔d6 ♖a4! 2 ♔c6 ♔f6! 3 ♔b5 ♖e4! draws as in diagram 152) ♔f4! 2 ♔d6 ♔e3! (as we shall see, Black's king must be on d2 to make a draw) 3 ♔c6 ♔d2! 4 ♔b6 ♖h5! (and not g5 or f5!) 5 a5 ♖h6+! 6 ♔c5 ♖h5+! and now White can try to hide on b2 or run to the h-file, but both lines lead to a draw:

1) **7 ♔c4** ♖h4+! 8 ♔b3 ♖h3+! 9 ♔b2 ♖h5! (not 9...♖h8? 10 ♖a3! ♖b8+ 11 ♖b3! ♖a8 12 ♖b5! ♔d3 13 ♔b3! ♔d4 14 ♔b4 ♖a7 and now not 15



155 =/=

*Original*



156 +/=

*Original*

♖b6? ♔d5! 16 ♔b5 ♖c7! drawing, but simply 15 ♖b8 with an easy victory) 10 ♖a4 ♖b5+! 11 ♔a3 ♔c2 12 ♖c4+ ♔d3! drawing.

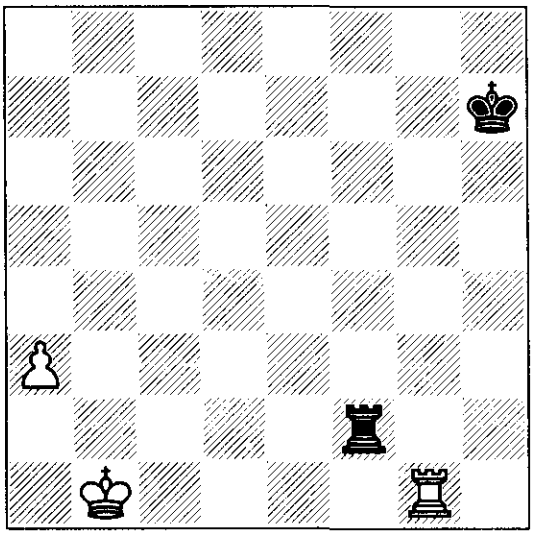
2) **7 ♔d4** ♖h4+! 8 ♔e5 ♖h5+! 9 ♔f4 ♖h4+! 10 ♔g5 ♖h8 11 a6 ♔c3 12 ♔f6 ♔b4 13 ♔e7 ♔c5 (13...♔b5? 14 a7! ♖a8 15 ♔d6! ♔b6 16 ♖b1+! wins) 14 a7 ♖a8 15 ♔d7 ♔b6 16 ♖b1+ ♔c5! draws.

Now we can see why alternatives for Black on moves 1-4 lead to a loss. If Black's king is on d3, then White wins by hiding his king at b3, meeting the reply ...♖h6 (which prevents a6) by ♖a4. If Black's king is on e2, White can hide on c2 and there is no danger of the king being forced to the a-file. Finally (with the king on d2), if Black plays 4...♖g5? then the plan of running to the kingside gains a crucial tempo.

**(156):** Black to play draws by 1...♖a4 2 ♖g3 ♔h5, as in the analysis of diagram 152. White to play wins by 1 ♖g3! (1 ♖a1? ♖a4! leads to the same draw as in diagram 152) ♔h5 (1...♖d4 2 ♔e5! ♖a4 3 ♔d5 ♔h5 4 ♔c5 transposes) 2 ♔d5! (2 ♔e5? ♖a4! 3 ♔d5 ♔h4 loses a vital tempo) ♖a4 (2...♔h4 3 ♖e3 ♔g5 4 ♖e4! ♖f3 5 a4! ♖a3 6 ♔e6 wins as in diagram 140) 3 ♔c5 ♖a8 4 ♔b5 ♖b8+ 5 ♔c4 ♖a8 6 ♔b3 ♖b8+ 7 ♔a2 ♖a8 8 ♖g1 and White wins. This line shows that 1 ♖g3! carries the threat of playing the king towards the queenside. If Black checks on the f-file White can hide on the third rank, while if Black switches his rook to a4 and a8 he falls into a lost position with his king cut off on the h-file. The free move does not allow Black time to construct an adequate defence.

We now examine some positions in which Black's king is cut off on the h-file, but White's king is cut off from the pawn by Black's rook operating on the second rank.

**(157):** White also wins if the black rook is on e2 or h2, but the position is drawn if the rook starts on d2.



157 +/=

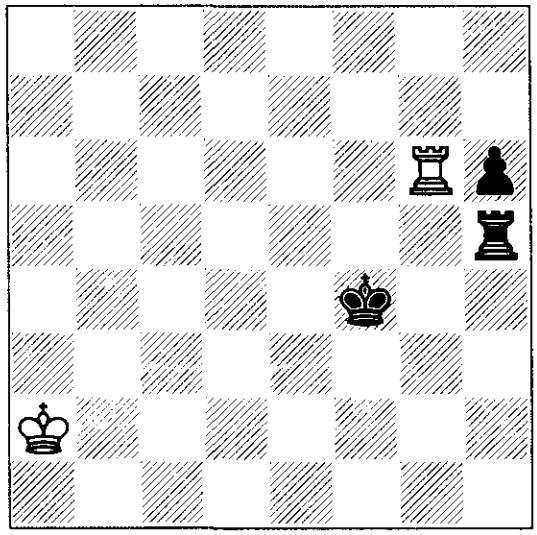
*Chéron, 1944*

Let us suppose that the rook is on f2. White wins by 1 ♖g4! ♔h6 2 a4! ♔h5 3 ♖g3!, transposing to diagram 129. With the rook on d2, the same continuation leads to a draw, in other words the conclusions with the pawn on a3 tend to reflect those of diagram 129 because White can force the advance of the pawn to a4. The only difference is that here White wins with the rook on h2 whereas in diagram 129 this led to a draw. The reason is that White can play 1 ♖g4! ♔h6 2 a4! ♔h5 3 ♖g8, winning as in diagram 130.

If we move Black's king to h6 then the position is a draw wherever Black's rook is on the second rank, because White doesn't have enough time to force the advance of the pawn to a4.

We now consider some practical examples with the a-pawn on the third rank.

**(158):** With White to play 1 ♔b2 ♖b5+ (1...♖h2+ 2 ♔c3 h5 3 ♔d3 h4 4 ♖g8 h3 5 ♖f8+ draws) 2 ♔c2 h5 3 ♔d2 ♖e5 (3...h4 4 ♔e2 draws) 4 ♖h6



158 =/+

**Komljenović – Gutman**

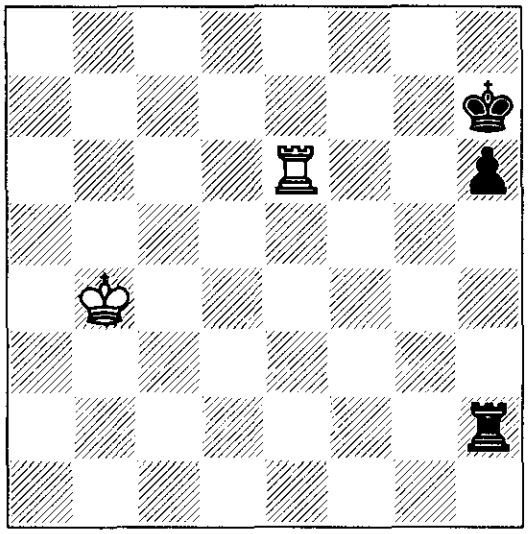
*Bad Wörishofen 1988*

♔g5 5 ♖h8 h4 6 ♖g8+ leads to a draw. In the game Black was to play:

1) **1...♖h3?** (as played by Gutman) 2 ♔b2 h5 3 ♔c2! (3 ♔c1? ♖d3! is a big mistake) ♖g3 4 ♖h6 ♖g5 5 ♔d2 ♖e5 6 ♖h8 ♔g5 7 ♖g8+ ♔f6 8 ♖f8+ ♔g5 9 ♖g8+ ♔h4 10 ♖g7 and the players soon agreed to a draw.

2) **1...♖a5+!** 2 ♔b2 h5! 3 ♔c2 (3 ♖f6+ and 3 ♖h6 are both answered by ...♔g5 followed by ...h4) h4 4 ♖h6 ♔g4 5 ♔d2 (5 ♖g6+ is answered by 5...♖g5, while 5 ♔d3 ♖a2 6 ♖g6+ ♔h5 7 ♖g8 h3! wins simply) ♖e5! 6 ♖g6+ (if White's rook were on h7 or h8 he could draw, but h6 is just too close to Black's king) ♔h5 7 ♖g1 h3! and wins.

**(159):** White to play draws easily by 1 ♔c3 bringing his king to the kingside. In the game Black was to play and Frias found the only move to win, namely 1...♖c2!. After this move, the position is very similar to that in diagram 150, line 2. The differences

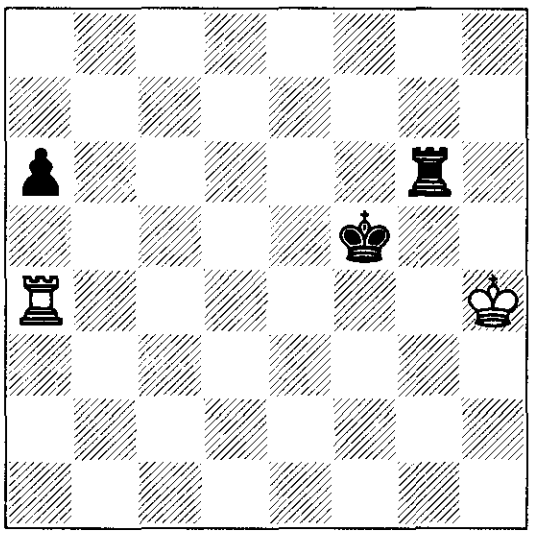


159 =/+

**Alburt – Frias**

*USA Ch (Cambridge Springs), 1988*

are that Black's rook is on c2, not c7, White's king is on b4, not b3, and White's rook is on e6, not d6. White's king is much better placed on b4 (because ...♖c6 may be met by the immediate ♔b5) and making this one change turns the position into a draw. But curiously enough having the rook on e6 instead of d6 makes White's position worse and turns it back into a loss! After 1...♖c2!, the game continued 2 ♔b3 (2 ♖e5 ♔g6! 3 ♖e6+ ♔g5 4 ♖e5+ ♔g4 5 ♖e4+ ♔f5 and the pawn will advance to h5) ♖c8 3 ♖d6 (3 ♖e5 loses as in the last note, so ...h5 cannot be prevented; after 3 ♖d6, White to play would draw by ♖d7+, but it is Black's move) h5 (3...♖c7 also wins, transposing exactly into diagram 150, but 3...h5 saves 17 moves) 4 ♔b2 (after 4 ♔b4 ♔g7 followed by ...♖h8, White's rook will have to abandon the sixth rank) ♖c5 (after White's ♔b2 Black finds an even quicker way to win; the threat is ...h4) 5 ♔b3 h4 6 ♔b4 ♖h5 7 ♔c3 h3 8 ♖d1 ♔g6 9 ♔d4 h2 10 ♖h1 ♖h3 0-1. This position was very accurately played by Black.



160 =/

**Zukertort – Steinitz**

*London match (1), 1872*

**(160):** Every legal White move maintains the draw except the four moves which put the rook *en prise*, so as yet there is little danger.

**1 ♔h5 ♖e6**
**2 ♖a5+**

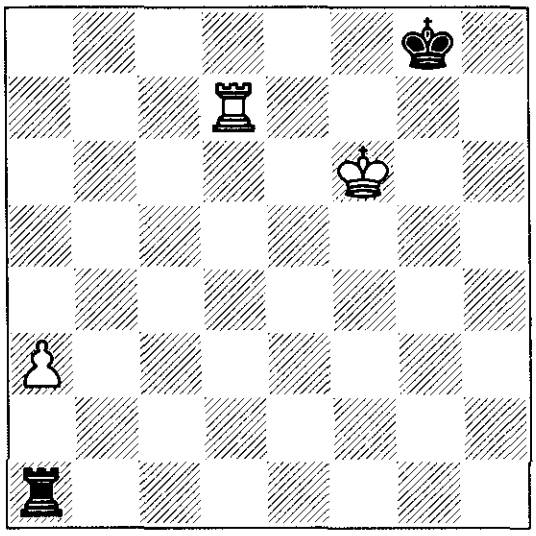
*ECE* considers that this move throws away the draw, but the fatal mistake came next move. The simplest drawing method is 2 ♖a1 ♔e4 3 ♔g5 ♔d4 (after 3...♖e5+ 4 ♔f6 Black cannot advance his pawn) 4 ♔f5 ♖b6 5 ♔f4 ♔c3 6 ♔e3 ♔b2 7 ♖a5 and Black doesn't have the slightest winning chance.

**2...♔e4 3 ♖a1** (certainly more sensible than 3 ♔g5?? ♖e5+ 0-1, as played by Zukertort) **♖e5+** and now:

1) **4 ♔g4?** a5! 5 ♔g3 (5 ♖a3 ♖d5 6 ♖a4+ ♔d3 7 ♔f3 ♖f5+ 8 ♔g4 ♖c5 9 ♔f3 ♔c3 wins) ♔d3 6 ♔f4 ♖h5 7 ♔g4 ♖d5 8 ♔f4 ♔c3 9 ♔e4 ♖h5 10 ♔e3 (10 ♖c1+ ♔b2! 11 ♖c8 ♖h3! 12 ♖b8+ ♖b3 wins after 13 ♖h8 a4! 14 ♖h2+ ♔c3! 15 ♔d5 ♖b2 16 ♖h3+ ♔b4! 17 ♖h4+ ♔b5 18 ♖h3 ♖d2+ followed by ...♔b4, or 13 ♖a8 ♖b4+! 14 ♔d5 a4 15 ♖h8 a3 16 ♔c5 ♔b3) ♖e5+! 11 ♔f4 ♔b2 12 ♖a4 ♔b3 13 ♖a1 ♖h5 14 ♖b1+ ♔c2 15 ♖b8 (15 ♖a1 a4) ♖h4+ 16 ♔e3 ♖c4, followed by ...a4.

2) **4 ♔g6!** a5 5 ♔f6! ♖h5 6 ♔e6 (this counterattack secures the draw) ♔d4 7 ♔d6 ♔c3 8 ♔c6! ♔b3 (8...♔b4 9 ♖b1+!) 9 ♖g1 ♖h3 (or else Black has no shelter from sideways checks) 10 ♔b5 a4 11 ♖b1+! ♔c2 12 ♖g1 a3 13 ♔b4 a2 14 ♖g2+! with a draw.

The next example shows how very complex a ♖+♙ v ♖ ending can be.



161 +/=

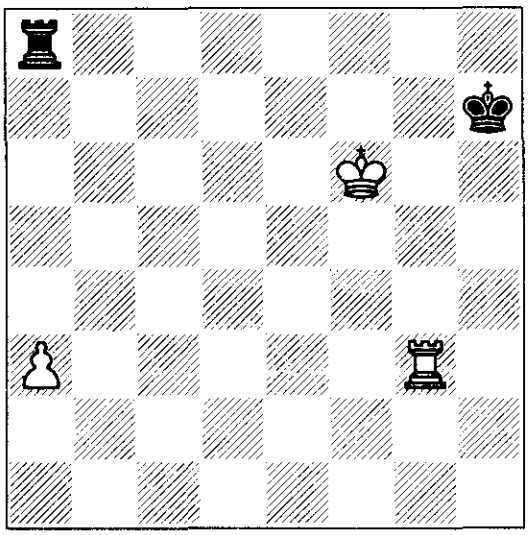
*Original*

**(161):** 1 ♖d8+! (not the immediate 1 ♖d3? when 1...♖f1+! 2 ♔e7 ♖f7+! 3 ♔e6 ♖f4! 4 ♔d5 ♔f7 draws) ♔h7 2 ♖d3! ♔g8 (after 2...♖f1+ 3 ♔e6 ♖f4 4 ♖g3 Black's king is cut off on the h-file; as we know from diagram 151 this is in general enough to win) 3 ♔e7! and now:

1) **3...♔g7** (although this defence loses relatively quickly, it forces precise play from White) 4 ♖g3+! ♔h6 5 ♔d6! ♔h5 6 ♔c5! ♔h4 7 ♖e3! (7 ♖d3? ♔g4 8 ♔b4 ♔f4 and Black's king is only cut off on the d-file, leading to a draw after 9 a4 ♔e5 10 a5 ♖b1+) ♔g4 8 ♔b4! (just in time to free the rook for operations on the e-file) ♖b1+ 9 ♔a5 ♔f4 10 ♖e8 and White can edge his king and a-pawn up the board, eventually winning as in diagram 2.

2) **3...♖e1+** 4 ♔d7! (White has to make sure he can cut off Black's king; after 4 ♔d6? ♔f7 5 ♖f3+ ♔e8! Black draws) ♖e4 (best, since 4...♔f7 loses to 5 ♖f3+ followed by a4) 5 ♖g3+! (White gains a tempo by giving two checks; after 5 ♖f3? ♖a4! 6 ♔c6 ♖a5 7 ♔b6 ♖a8! Black improves his rook position and draws) ♔f7 6 ♖f3+! ♔g6 7 ♔c6! (the only move, because White must be ready to meet ...♖a4 by ♔b5) ♔g5 8 ♔b5! (threatening a4, and so forcing Black's hand) ♖e5+ (after 8...♔g4 9 ♖d3 ♖e5+ 10 ♔c4 Black cannot prevent a4) 9 ♔c4 (after eight absolutely unique moves, White has a choice; 9 ♔b4 also wins) ♖e4+ 10 ♔b3! ♔g4 11 ♖f1 and now we have transposed into the analysis of diagram 150.

**(162):** This diagram is another reciprocal zugzwang. The basic principle is that if White can bring his king



162 =/–

*Original*

back to a2 safely then he wins by diagram 151.

With White to play 1 ♔e5 ♔h6! 2 ♔d4 ♔h5! 3 ♔c4 ♔h4! displaces the rook from the g-file and draws (see comments in line 2 below). Other king moves are also met by ...♔h6, while after a rook move on the third rank Black can draw by either ...♔g8 or ...♖a4 (since White doesn't threaten his king march when his rook is not on the g-file).

But Black to play must damage his position, either by playing his king to h8, losing a tempo for the advance to h4, or by moving his rook from its best square.

1) **1...♔h8** 2 ♔e5 ♔h7 3 ♔d5 ♔h6 4 ♔c4 ♔h5 5 ♔b3 ♖b8+ 6 ♔a2 ♖a8 7 ♖g1 ♔h6 8 ♔b3 and wins much as in diagram 151.

2) **1...♖a7** (it takes eight moves for White to prove that the rook is worse here than on a8) 2 ♔e5 ♔h6 3 ♔d5 ♔h5 4 ♔c4 ♔h4 5 ♖d3! ♔g5 6 ♔b5! and now:

2a) **6...♖b7+** 7 ♔a6 ♖b1 8 a4 ♔f4 (or else ♖e3, with a win by diagram 2) 9 ♖d5! ♔e4 10 ♖h5 ♔d4 11 a5 ♔c4 12 ♔a7! ♔b4 13 a6 ♖g1 14 ♖d5 wins for White.

2b) **6...♔f6** 7 a4 ♔e7 (7...♖b7+ 8 ♔c6 ♖a7 9 ♖a3 ♔e7 10 a5 ♔d8 11 ♔b6! ♖h7 12 a6 wins) 8 a5! and White wins by diagram 88. But, by diagram 87, this final position is a draw when Black's rook is on a8, so here we have discovered the fatal weakness created by 1...♖a7.

3) **1...♖a5** (the problem with this move is that Black's rook is tactically exposed on a5) 2 ♔e6 ♔h6 3 ♔d6 ♔h5 4 ♔c6! ♖a8 (4...♔h6 5 ♔b6 ♖a8 6 ♔b5 is as in line 1, while 4...♔h4 5 ♖b3 leaves Black unable to prevent ♖b4+ followed by a4; it is the line 4...♔h4 5 ♖b3 ♔g5 6 ♖b5+ which exposes the weakness of 1...♖a5; if Black's rook were on a7 then this line would be a draw) 5 ♔b5! ♔h4 6 ♖d3 ♖b8+ 7 ♔c6 and White will soon play ♖d4+ and a4 winning.

4) **1...♖a6+** and **1...♖a4.** Both of these lose a vital tempo when White's king reaches c5 because the threat of ♔b5 followed by a4 forces ...♖a8, when White has time to retreat safely to a2.

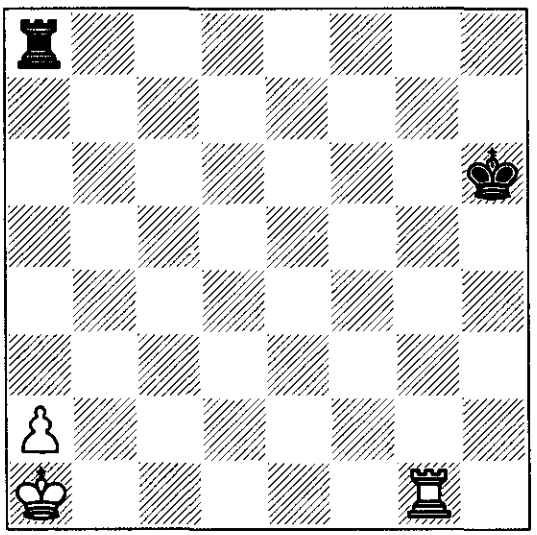
There are only two reciprocal zugzwangs with ♖+♙a3 v ♖. Diagram 162 is one, the other is W♔f3, ♖a1, ♙a3 v B♔h2, ♖a4.

**Practical tips:** Diagrams 147, 150 and 151 are most important for the over-the-board player.

## 1.6: Pawn on the second rank

Chéron and Fila made the main contributions to the analysis of this ending. Just as in section 1.5, we first look at the case in which Black's king is cut off along a file. Since the king needs to be on the h-file in order to win with the pawn on a3, this is the only case which need concern us here.

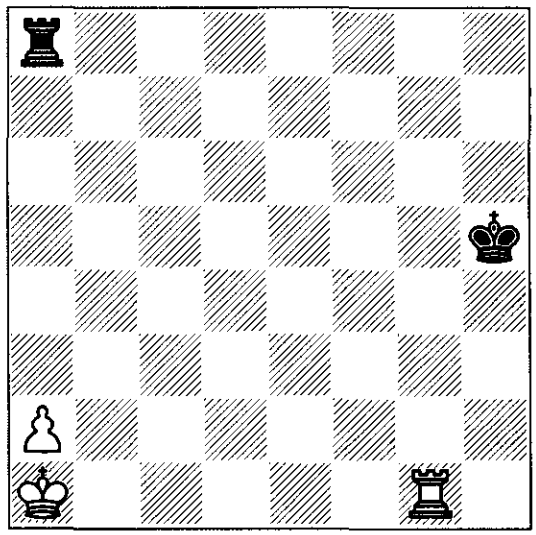
Surprisingly, the result depends crucially on where Black's king lies on the h-file.



163 +/=

*Chéron, 1952*

**(163):** White to play wins wherever Black's king is on the h-file, except for the single square h5. We first take the case of the king on h6. 1 ♔b2! ♖b8+ 2 ♔c3 ♖a8 3 ♔b3! ♖b8+ 4 ♔c4 ♖c8+ (better than 4...♖a8 5 ♖a1 with play similar to that at move 12 in the main line) 5 ♔b5 ♖b8+ 6 ♔c6 ♖c8+ 7 ♔b7 ♖c4 (7...♖c3 8 a4! ♖a3 9 ♖g4! ♔h5 10 ♖b4 ♔g6 11 ♔b6 followed by a5) 8 ♖a1 ♖a4 9 ♔b6 ♔g5 10 ♔b5! ♖a3 11 ♔b4! ♖f3 (11...♖a8 12 a4 ♔f5 13 a5 ♔e6 14 a6 ♔d6 15 ♔a5 ♔c7 16 ♖c1+! wins) 12 a4! ♖f4+ 13 ♔b5 ♖f5+ 14 ♔b6 ♖f6+ 15 ♔c7 ♖f7+ 16 ♔d8 ♖f8+ 17 ♔e7 ♖a8 18 a5 and wins.



164 =/=

*Fila, 1931*
*(corrected by Chéron, 1952)*

**(164):** After 1 ♔b2 ♖b8+! 2 ♔c3 ♖a8 3 ♔b3 ♖b8+! 4 ♔c4 ♖c8+! (not 4...♖a8? 5 ♖a1! winning for White) 5 ♔b5 ♖b8+ 6 ♔c6 ♖c8+ 7 ♔b7 ♖c3! (7...♖c4 8 ♖a1 wins as in the previous diagram) we can see the crucial difference. Thanks to the position of the king on h5, the move 8 a4 simply loses the pawn after 8...♖a3!. On the other hand 8 ♖a1 ♖a3! 9 ♔b6 ♔g5 10 ♔b5 ♔f6 11 ♔b4 ♖a8 12 a4 ♔e6 is a crucial tempo slower than the previous diagram, leading to a clear draw. The final winning try is 8 ♖g8, but then

8...♖f3 9 a4 (9 ♖a8 ♔g6 10 a4 ♖f4 11 a5 ♖f7+! 12 ♔c6 ♖f6+ 13 ♔d5 ♖f5+ 14 ♔e4 ♖b5! 15 a6 ♔g7 with a Vancura draw to follow) ♖f7+! 10 ♔b6 ♖f6+! 11 ♔b5 ♖f5+! 12 ♔b4 ♖f4+! 13 ♔b3 ♖f3+! *(D)* and now:

1) **14 ♔b2** ♖f2+! 15 ♔b1 ♖f4! (a very hard move to find; 15...♖f1+? 16 ♔c2! ♖f2+ 17 ♔d3! ♖f3+ 18 ♔e4! ♖a3 19 ♖a8 ♔h6 20 a5 ♔g7 21 a6 ♖h3 22 ♖a7+ ♔f6 23 ♔d5 leads to a Romanovsky win) 16 a5 (16 ♖a8 ♔g6 and Black's rook is already attacking the pawn from the side) ♖f7! (another really tough 'only move'; 16...♖f6? 17 ♖b8 wins because 17...♖a6 18 ♖b5+ forces the king in the wrong direction) 17 ♖a8 (17 ♖g3 ♖a7! 18 ♖a3 ♔g5 19 ♔b2 ♔f6 20 ♔b3 ♔e6 21 ♔b4 ♔d6 22 a6 ♔c7 23 ♔b5 ♔b8! draws, as does 17 ♖b8 ♖a7 18 ♖b5+ ♔g6) ♔g6 18 a6 ♔g7! (18...♔h7? loses, for reasons which will become clear next move) 19 ♖b8 ♔f6! (not 19...♔g6? 20 ♖b7 ♖f8 21 a7 ♖a8 22 ♔b2 and wins) 20 ♖b7 ♖f8! 21 a7 ♖a8! and Black's king can just make it across in time.

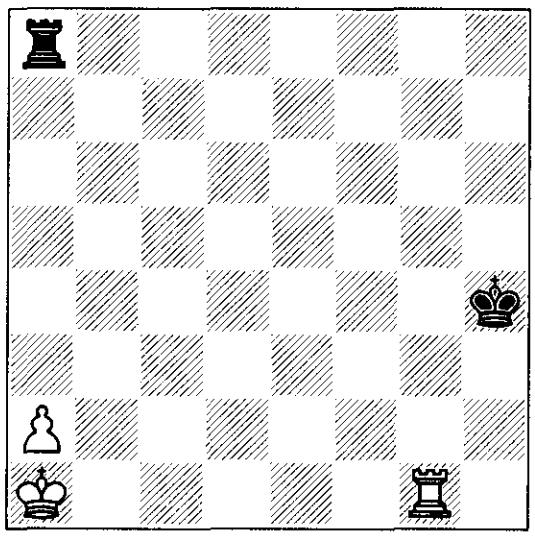
2) **14 ♔c2** ♖a3! (this is Chéron's correction; Fila gave 14...♖f7?, but in this case White wins by 15 ♔d3, just as after 15...♖f1+? in line 1) 15 ♖a8 ♔g6 and now:

2a) **16 a5** ♔g7 17 ♖a7+ (17 a6 ♖h3! draws as in diagram 44) ♔f6 18 ♔b2 ♖e3 drawing after 19 a6 ♖e8!, 19 ♖b7 ♖e8 or 19 ♖a8 ♔g7! 20 a6 ♖e6.

2b) **16 ♔b2** ♖f3! (after 16...♖e3?, 17 ♖f8! leads to a winning position as in diagram 132) 17 a5 ♔g7 18 ♖a7+ (18 ♖b8 ♖f5! 19 ♖b7+ ♔f6! 20 a6 ♖a5 followed by ...♔e6 draws) ♔f8! 19 ♖b7 (19 a6 ♖f6) ♖f6! 20 ♖b6 ♖f5 21 a6 ♖a5! 22 ♔b3 (22 ♖h6 ♔g7! draws) ♔e7 23 ♔b4 ♖a1 24 ♔c5 ♔d7 and Black draws.

For Black to play see the comments after diagram 166.

However if we move the king one square further, to h4, then White again wins.

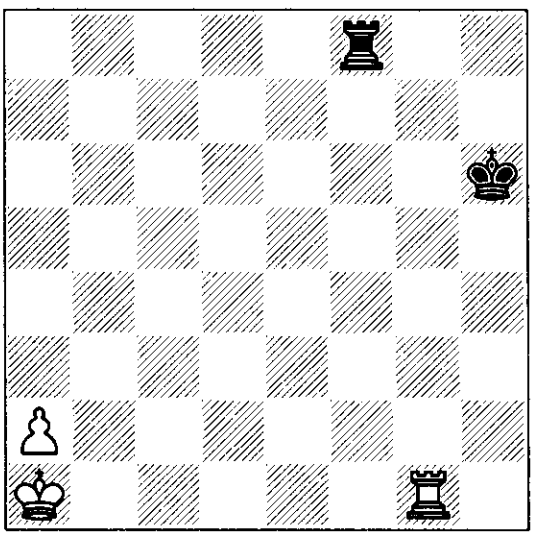


165 +/=

*Chéron, 1952*

**(165):** 1 ♔b2! ♖b8+ 2 ♔c3 ♖a8 3 ♔b3! ♖b8+ 4 ♔c4! ♖c8+ (4...♖a8 5 ♖a1 is still winning; this line doesn't depend on Black's king position) 5 ♔b5 ♖b8+ 6 ♔c6 ♖c8+ 7 ♔b7 ♖c3 (7...♖c4 8 ♖a1 ♖a4 9 ♔b6 is the same as in diagram 163) 8 ♖g8! ♖f3 9 a4 ♖f7+ 10 ♔b6 ♖f6+ 11 ♔b5 ♖f5+ 12 ♔b4 ♖f4+ 13 ♔b3 ♖f3+ 14 ♔c2 ♖a3 (14...♖f2+ 15 ♔d3 wins just as after 15...♖f1+? in line 1 of the previous diagram) 15 ♖a8! ♔g5 16 a5 ♔g6 17 a6 ♔g7 (if Black were to move then he could draw, but White's extra tempo is decisive) 18 ♔b2 ♖f3 19 ♖b8 and wins.

The fact that Black has only one square on the h-file for his king might suggest that if Black were to play with his king on h5 then he would be in zugzwang, since 1...♔h6? and 1...♔h4? both lose. This doesn't happen, but to see why we must consider positions in which Black defends by checking White's king from the f-file.



166 +/=

*Chéron, 1967*

**(166):** The conclusions in this case are slightly different to those given above. White to play wins if Black's king is on h8, h7, h6, h3 or h2, but with the king on h4 or h5 White to play cannot win. In this diagram, White wins by 1 ♖g3! (1 a3? ♖f3 2 ♔b2 ♖f2+ is a draw as in diagram 152, and not surprisingly 1 ♔b2? ♖f2+ is no better for White) and now:

1) **1...♖d8** (the threat was 2 a3, but now 2 a3? is met by 2...♖d2! with a draw as in diagram 157) 2 ♔b2! ♖b8+ 3 ♔c3 ♖a8 4 ♔b3! ♖b8+ 5 ♔c4 ♖c8+ (5...♖a8 6 a3 only helps White) 6 ♔b5 ♖b8+ 7 ♔c6 ♖c8+ 8 ♔b7 ♖c4 9 ♔b6 ♖a4 10 a3! ♖a8 11 ♔b5 and White meets Black's checks by playing his king back to a2, followed by ♖g1 winning as in diagram 151.

2) **1...♔h5** (1...♖a8 2 a3) 2 a3! (threatening ♔b2) ♔h4 3 ♖g2! (a difficult move to find; 3 ♖g1? ♖f2! is a draw with Black's king so active – see diagram 157) and now:

2a) **3...♖f7** 4 ♔b2 (threat a4) ♖f4 5 ♔a2 surprisingly places Black in zugzwang. If the rook moves on the file then a4 wins, so we must consider the replies 5...♖e4, 5...♔h5 and 5...♔h3. After **5...♖e4** 6 ♔b3 ♖e3+ 7 ♔b4 ♖e4+ 8 ♔b5 ♖e5+ 9 ♔c6 ♖e6+ 10 ♔d5 ♖e1 (10...♖a6 11 ♖a2 also wins) 11 ♖a2 ♖d1+ 12 ♔c4 ♖c1+ 13 ♔b3 ♖b1+ 14 ♖b2 the pawn advances. If **5...♔h5**, then 6 ♖g3 ♔h4 7 ♖e3 ♔g5 8 ♔b3! ♖f8 9 a4! ♔f4 (if Black could get his king back to f7 then he would be able to draw against a pawn on a4, but this is impossible) 10 ♖e1 ♖b8+ 11 ♔c4 and wins by playing the king to c6 and meeting ...♖a8 by ♖a1. Finally, **5...♔h3** runs into 6 ♖g5 (threat ♔b3) ♔h4 7 ♖c5 ♔g4 8 ♔b3 ♖f3+ 9 ♔b4 ♔f4 10 a4 ♖f1 11 a5 and Black's king is cut off along a rank.

2b) **3...♖f1+** 4 ♔b2 ♖f4 5 ♔a2 as in line 2a.

2c) **3...♔h3** 4 ♖g5 ♔h4 5 ♖c5 (the same manoeuvre as in line 2a after 5...♔h3) with two possible variations, 5...♔g4 and 5...♖a8. The first continues **5...♔g4** 6 a4! (the immediate 6 ♔b2? fails to 6...♖f5! 7 ♖c4+ ♔g5! and the king returns) ♔f4 7 ♔b2! (the king must head for c3 to keep the enemy king away) ♔e4 8 ♔c3! ♖f1 9

♔c4 ♖c1+ 10 ♔b5 ♖b1+ 11 ♔c6 ♔d4 12 a5 ♖b2 (12...♖h1 13 ♔b6) 13 ♖d5+ ♔c4 (13...♔e4 14 ♖b5) 14 ♖d6 ♖a2 15 ♔b6 ♖b2+ 16 ♔c7 and the pawn advances. After **5...♖a8** White wins by 6 ♔b2 ♔g4 7 ♔b3! ♖b8+ 8 ♔c4 ♖a8 9 ♔b4! ♔f4 (9...♖b8+ 10 ♖b5 doesn't help) 10 a4 ♔e4 11 a5 ♔d4 12 ♖b5 (threat ♖b6) ♖a7 13 ♖b8 (13 ♖b6? ♔d5! 14 ♔b5 ♖c7! draws) ♔d5 14 ♔b5! followed by ♖d8+ and a6 wins.

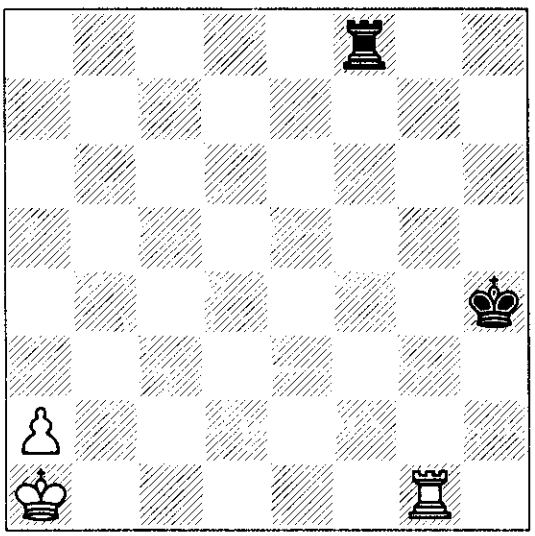
When Black's king is on h7 or h8 White can win in the same way (although quicker methods are possible). When Black's king is on h5, the draw is clear from analysis we have already carried out, because 1 ♔b2 ♖b8+ is diagram 164, while 1 ♖g3 is useless because Black replies 1...♔h4 2 ♖g7 ♖f1+. Finally 1 ♖g2 ♖a8! is similar to diagram 164 but better for Black, because White has lost the option of supporting the pawn by ♖a1.

We can now complete the analysis of diagram 164 by showing that Black to move draws even though 1...♔h4? and 1...♔h6? both lose. Black can save the position by 1...♖f8, leading to diagram 166.

The situation with the king on h4 is more interesting.

**(167):** There are two reasonable tries:

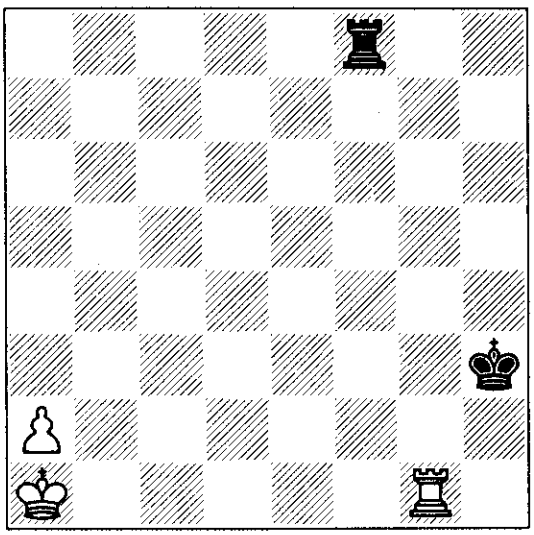
1) **1 ♔b2** (1 a3 ♖f2 is a draw according to diagram 157) ♖f2+! (the black king is on a losing square, so 1...♖b8+ fails as in diagram 165) 2 ♔b3 ♖f3+! 3 ♔b4 ♖f4+! 4 ♔b5 ♖f5+! 5 ♔c6 ♖f6+! 6 ♔d5 ♖f5+! 7 ♔e6 ♖a5 8 ♖a1 ♖a3 9 ♔d5 ♔g5 10 ♔c5 ♔f5 11 ♔b4 ♖a8 12 a4 ♔e6 and Black is in time.



167 =/=

*Chéron, 1967*

2) **1 ♖g2** ♖a8 2 ♔b2 (even though Black's king is on a losing square, the white rook is badly placed on g2 as it cannot move behind the pawn) ♖b8+! 3 ♔c3 ♖c8+ 4 ♔b4 ♖b8+! 5 ♔c5 ♖a8 and White cannot make progress.



168 +/=

*Chéron, 1967*

**(168):** Here again Black loses, but White's winning plan is different:

1) **1 ♖g5?** ♔h4! 2 ♖c5 (2 ♖b5 ♔g4 3 a4 ♔f4 4 ♔b2 ♔e4 5 ♔c3 ♖c8+! 6 ♔b4 ♔d4! transposes to 1a below) ♖a8! 3 ♔b2 ♔g4! (3...♔g3? 4 ♖c4! wins) and now:

1a) **4 ♔b3** ♖b8+! 5 ♔a4 ♔f4 6 ♖b5 ♖c8 7 ♔b4 ♔e4 8 a4 ♔d4! 9 a5 ♖c1 10 a6 ♖a1! 11 ♖a5 (11 ♖b6 ♔d5) ♖b1+! 12 ♔a3 ♖a1+! with a draw.

1b) **4 ♖b5** ♔f4! 5 ♔b3 ♔e4 6 a4 ♖c8! (Black is aiming to transpose to line 1a, but he must decide whether to play ...♖c8 or ...♔d4 first; however, 6...♔d4? 7 a5! ♖c8 8 a6! wins for White) 7 a5 (7 ♔b4 ♔d4 is 1a) ♖c1! 8 ♔b4 (8 a6 ♖a1) ♔d4 and again we reach line 1a.

2) **1 ♖g6?** ♔h4! 2 a3 (2 ♔b2 is worse than in line 1 because White's rook cannot interpose) ♖f2! 3 ♔b1 (3 a4 ♖f4! 4 ♖a6 ♔g5 draws, but the move played prevents a check on a4 and so threatens to win by 4 a4 ♖f4 5 a5) ♔h5 4 ♖g3 ♔h4 5 ♖e3 (5 ♖g8 ♖f1+ is an easy draw because there is no real shelter from the checks) ♔g5 6 a4 ♖f4 7 ♖a3 ♔f5 8 a6 ♔e6 draws.

And the winning line is:

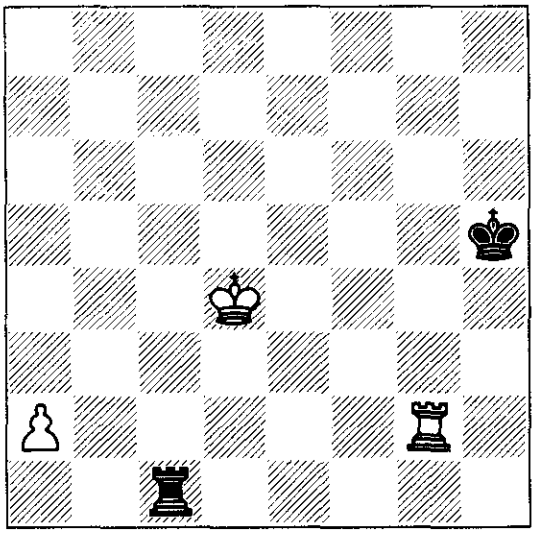
3) **1 a3!** and now:

3a) **1...♔h4** 2 ♖g2! reaching diagram 166.

3b) **1...♖f3** 2 ♔b2 ♖f2+ 3 ♔b3 ♖f3+ 4 ♔b4 ♖f4+ 5 ♔c5 ♖f5+ 6 ♔d6 ♖f6+ 7 ♔e5 ♖a6 8 ♖a1! ♖a4 9 ♔d5 and wins as in diagram 154.

3c) **1...♖f2** 2 ♖g5! ♔h4 3 ♖c5 ♔g4 (3...♖f4 4 ♔b2 ♔g4 5 ♔b3 wins) 4 a4! ♔f4 (4...♖f4 5 a5) 5 a5! ♔e4 6 a6! ♖f7 (6...♖f8 7 a7 ♔d4 8 ♖a5 ♖a8 9 ♔b2 ♔c4 10 ♔a3 wins) 7 ♖a5 ♖a7 8 ♔b2 ♔d4 9 ♔b3! and wins.

Of all the positions in which the black king is cut off along a file, the following is perhaps the most remarkable.



169 =/–

*Original*

**(169):** Incredibly, this is reciprocal zugzwang. The basic idea is that White has two possible plans. The first is to play a4 directly (impossible at the moment because of ...♖a1). The second only works when White's king is on d5; the idea is to play ♖e2 followed by a4, when ...♖a1 may be met by ♖e4. With Black to move the analysis runs:

B1) **1...♖f1** (any rook move on the first rank lets the white king onto the c-file, when a4 becomes a threat) 2 ♔c3 ♖f3+ 3 ♔b2 ♖f4 (or else a4) 4 a3 (4 ♖g3 is faster) transposes into line 2a of diagram 166.

B2) **1...♖c8** 2 a4! followed by ♖a2 with an easy win.

B3) **1...♔h6** 2 ♔d5 (the threat is 3 a4 ♖a1 4 ♖g4, so the reply is forced) ♔h5 3 ♖e2 ♔g4 (3...♔g6 4 a4 ♖a1 5 ♖e4 is the same) 4 a4 ♖a1 5 ♖e4+!

♔f5 6 ♖d4 and wins as in diagram 140.

B4) **1...♔h4** 2 ♔d5! ♖c3 (2...♔h5 is line B3) 3 ♖e2 ♖a3 (3...♔g5 4 a4! ♖a3 5 ♖e4 is essentially line B3) 4 ♔c4 ♖a8 5 ♔b5 ♖b8+ 6 ♔c6 ♖c8+ (6...♖a8 7 ♖e4+ and 8 a4) 7 ♔b7 ♖c4 8 ♔b6 ♖f4 9 ♖e3 (intending 10 ♔b5, forcing through a4 because the king can shelter from rook checks on b3) ♔g5 (there isn't much Black can do) 10 ♔b5 ♖f5+ 11 ♔b4 ♖f4+ 12 ♔b3 ♔f6 13 a4! (or else ...♖f5-e5 draws) and Black cannot prevent the further advance of the pawn.

It is perhaps more surprising that White to play has no good move.

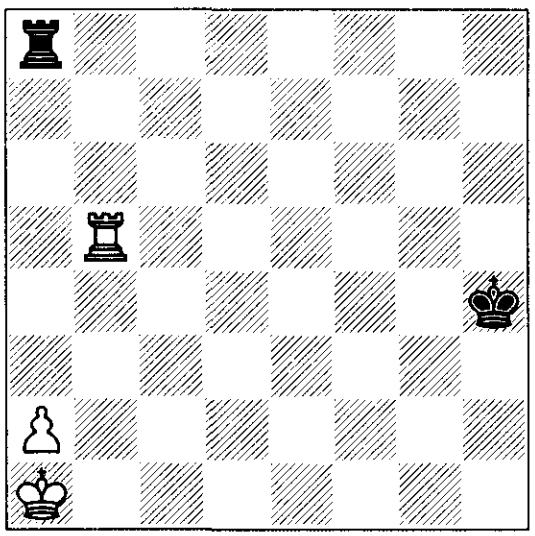
The various attempts are:

W1) **1 a3** ♖a1! 2 ♖g3 ♔h4! 3 ♖d3 (3 ♖e3 is ineffective because Black attacks the rook before White's king can defend the a3-pawn) ♔g5 4 ♔c4 ♔f5 5 ♔b4 ♖b1+ with an easy draw.

W2) **1 ♖e2** (threat 2 ♔d5 followed by a4) ♔g4! (1...♔g5? 2 ♔d5! falls in with White's plan) 2 ♔d5 (2 a4 ♖a1! 3 ♖e4+ ♔f5! 4 ♔d5 ♖d1+ and exchanging rooks draws; this is the critical line, because in comparison with line B3 Black's extra tempo changes the result) ♖a1! (2...♔f3? 3 ♖e4! ♖c8 4 ♖h4! ♔e3 5 a4! ♔d3 6 a5! ♔c3 7 a6! ♖a8 8 ♖a4! wins) 3 ♔c4 (3 ♖e4+ ♔f5!) ♔f3! 4 ♖b2 ♔e4 5 ♔b5 ♔d5 6 a4 ♔d6 draws.

W3) **1 ♔d5** ♖c3! (Black threatens 2...♖a3! 3 ♔c4 ♖a8! with the draw of diagram 164; there is little White can do to prevent this) 2 ♖e2 (2 ♖g1 ♖a3! 3 ♖a1 ♔g6 4 ♔c5 ♔f6 5 ♔b4 ♖a8 6 a4 ♔e7 draws) ♖a3! 3 ♔c4 ♖a8! 4 ♔b5 ♖b8+! 5 ♔c6 ♖a8! and whereas with Black's king on h4 White could win by ♖e4+ and a4, here White is unable to make progress.

Now we analyse a few positions in which Black's king is cut off on a rank.



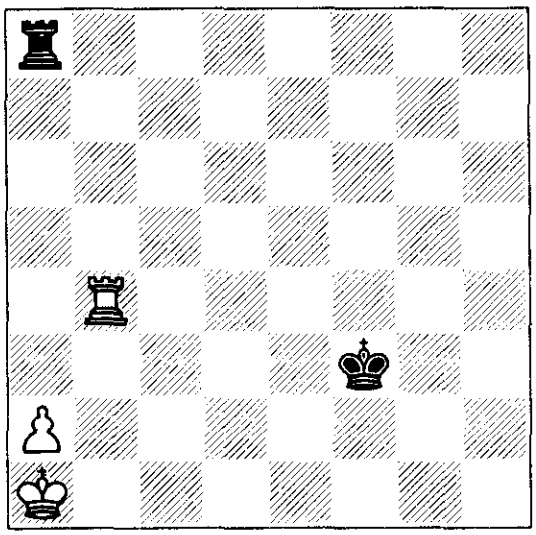
170 +/=

*Original*

**(170):** The draw after 1...♔g4! 2 ♔b2 ♔f4! follows from line 1b in the previous diagram. White to play continues 1 ♔b2! ♔g4 2 ♔b3! ♔f4 (or 2...♖e8 3 a4 ♖e3+ 4 ♔b4 ♖e4+ 5 ♔a5 ♔f3 6 ♖h5 ♖e1 7 ♔b6 and wins) 3 a4! ♔e4 4 a5! ♔d4 5 ♔b4 (threat ♖b6) ♖a7 6 ♖b8 followed by ♔b5 and wins.

When Black's king is cut off on the fourth rank White's winning chances are much better.

**(171):** With White to play we have 1 a4 ♔e3 2 ♔b2 ♔d3 3 ♔b3! ♖a7 (3...♖c8 4 a5) 4 ♖b5 ♖c7 (after 4...♔d4 5 a5 Black has an extra tempo compared to the previous diagram, but he cannot make use of it because if his rook ever leaves the a-file, White can reply a6) 5 a5! ♖c1 (5...♖c3+ 6 ♔a4) 6



171 +/=

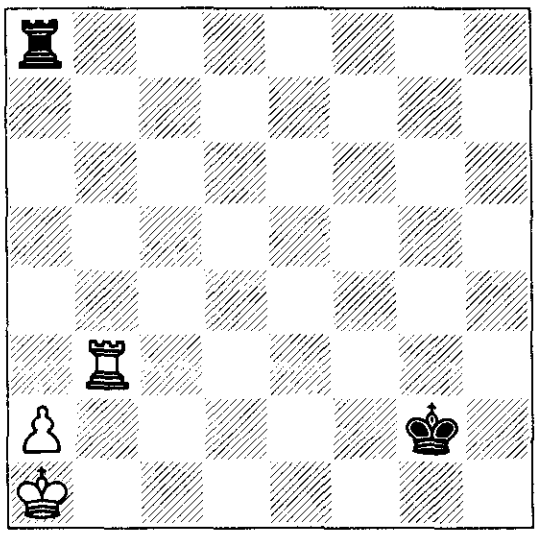
*Original*

♖d5+! ♔e4 7 ♖d8! (the only move to win; 7 ♖d7? ♔e5! draws after 8 a6 ♖a1 or 8 ♔b4 ♔e6 9 ♖d3 ♖b1+ and there is no place for White's king to hide) ♔e5 8 ♔b4 ♖a1 (8...♔e6 9 a6! ♖a1 10 ♔b5! ♖b1+ 11 ♔c6 ♖c1+ 12 ♔b7 ♖b1+ 13 ♔a7 transposes to the main line) 9 ♔b5! ♖b1+ 10 ♔c6 ♖c1+ 11 ♔b6 ♖b1+ 12 ♔a7! ♔e6 13 a6! ♔e7 14 ♖b8! and wins as in diagram 30.

Black to play draws by 1...♔e3 2 ♔b2 ♔d3 3 a4 ♖c8 4 a5 (4 ♖h4 ♖c4) ♖c5 5 ♖a4 (5 a6 ♖a5! 6 ♖b6 ♔c4) ♖b5+! 6 ♔a3 ♔c2 7 ♖c4+ ♔d3!.

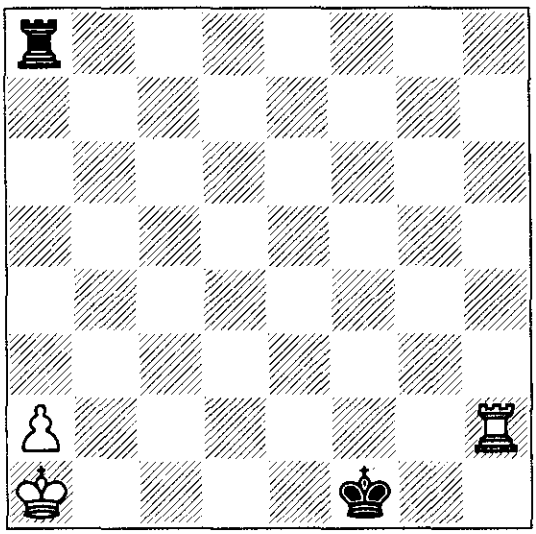
**(172):** White to play wins after 1 ♖b4 ♔f3 2 ♔b2 transposing to the previous diagram. Black to play draws by 1...♔f2 2 ♔b2 (2 ♖b4 ♔e3) ♔e2! and White has nothing better than 3 ♖b4 ♔d3 again reaching the previous diagram.

**(173):** Unbelievable but true! This is a position of reciprocal zugzwang. We first of all show why it is a draw with White to move:



172 +/=

*Original*



173 =/–

*Original*

W1) **1 ♔b2** ♖b8+! 2 ♔c3 ♖c8+ 3 ♔b4 ♖b8+! 4 ♔c5 ♖c8+ 5 ♔b6 ♖a8! 6 ♖c2 (6 ♔b7 ♖a3) ♔e1! (not 6...♖a3? 7 ♔b5 and the pawn advances, nor 6...♔g1? 7 ♔b5! ♖b8+ 8 ♔c4 ♖c8+ 9 ♔b3! ♖b8+ 10 ♔c3 ♖c8+ 11 ♔b2 ♖b8+ 12 ♔a1 ♖a8 13 ♖c4 and White wins as in line 2 below) 7 ♔b5 ♔d1 8 ♖h2 ♖b8+! and Black simply checks the white king back all the way back to a1.

W2) **1 ♖h4** ♔e2 2 ♔b2 ♔d3! 3 a4 (3 ♔b3 ♖b8+! 4 ♖b4 ♖c8 is a simple draw) ♖b8+! 4 ♔a3 (at first sight White can win by edging his pieces up the a-file, but Black has a hidden defence) ♔c3 5 a5 ♖b1 6 ♔a4 ♖g1 (this is a key drawing position with Black's king cut off along a rank) 7 a6 (7 ♔b5 ♖g5+ and there is no shelter, or 7 ♖h6 ♔c4 draws) ♖g6! 8 ♔b5 ♖g5+! and Black draws.

W3) **1 ♖c2** ♔e1! (the same reply adequately answers 1 ♖d2 and 1 ♖b2) 2 ♔b2 ♖b8+ 3 ♔c3 ♖c8+ and Black draws.

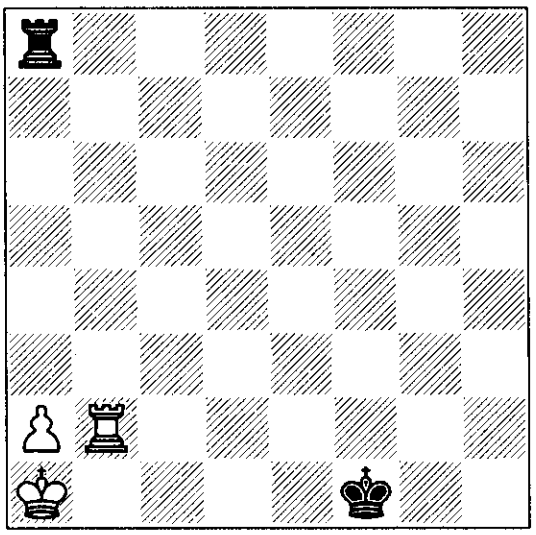
Now we consider the diagram with Black to move.

B1) **1...♔g1** 2 ♖h4 ♔f2 3 a4 ♔e3 4 ♔b2 ♔d3 5 ♔b3! ♖b8+ 6 ♖b4! ♖a8 7 ♖b5 wins as in diagram 171.

B2) **1...♖a7** (if the rook moves anywhere on the eighth rank, White simply plays a4) 2 ♔b2 ♖b7+ (2...♖a8 3 ♖h4 ♔e2 4 a4 transposes to line B1) 3 ♔c3 ♖c7+ 4 ♔b4 ♖b7+ 5 ♔c5 ♖a7 6 ♔b5 ♖b7+ 7 ♔a6 ♖b4 8 ♔a5 ♖b8 9 a4 ♔e1 10 ♔a6 ♖a8+ 11 ♔b5! ♖b8+ 12 ♔c6 ♖a8 13 ♖h4 followed by ♔b7 and the pawn advances.

B3) **1...♔e1** (it is hard to imagine that this move fatally weakens Black's position) 2 ♔b2! ♖b8+ (2...♔d1 3 ♖h4 ♔d2 4 ♔b3! ♖b8+ 5 ♖b4 ♖c8 6 ♖d4+ ♔e3 7 ♖c4 ♖a8 8 a4 ♔d3 9 ♖b4 is line B1 again) 3 ♔c3 ♖c8+ 4 ♔b4 ♖b8+ 5 ♔c5 ♖a8 (5...♖c8+ 6 ♔b6 ♖a8 7 ♔b7 transposes) 6 ♔b5 ♖b8+ 7 ♔c6 ♖a8 8 ♔b7 ♖a3 9 ♔b6! (this is also the reply to 8...♖a4 and 8...♖a5; in all cases White threatens to force the advance of his pawn by playing ♔b5 and, if necessary, ♔b4) ♖a8 (9...♔d1 10 ♔b5! ♔c1 11 ♔b4! ♖g3 12 ♖h4! ♔b2 13 a4! and the pawn romps home) 10 ♖h4!! (this move is the reason why Black's king is badly placed on e1; using a tactical resource White advances his pawn to a4) ♖a3 (the only way to prevent an immediate a4) 11 ♔b5! ♔d1 12 ♖h2 (now the advance of the pawn is inevitable) ♖g3 (the only chance is to attack from the side; 12...♔c1 13 ♔b4! wins after 13...♖a8 14 a4! ♖b8+ 15 ♔c5 as in line B2, or 13...♖g3 14 ♖h4!) 13 a4 ♖g5+ 14 ♔b4 ♖g4+ 15 ♔b3 ♖g3+ 16 ♔b2 ♖g5 17 ♖h4 ♔d2 18 ♔b3 ♔d3 19 ♔b4 followed by a5 and White wins.

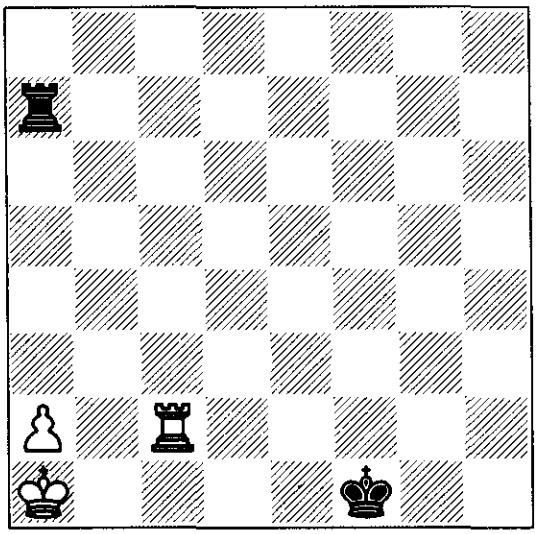
Using this fundamental position we can determine the result of other positions in which Black's king is cut off along the second rank.



174 +/=

*Original*

**(174):** White to move wins with 1 ♖h2!, putting Black in zugzwang. Black to play draws with 1...♔e1! as in line W3 above.



175 +/–

*Original*

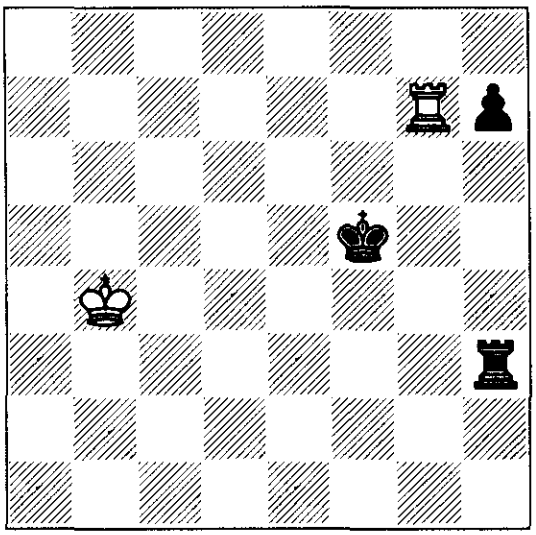
**(175):** White has two possible wins. One is 1 ♔b2 ♖b7+ 2 ♔c3 ♖c7+ 3 ♔b3 ♖b7+ 4 ♔a4 ♖b8 5 a3! ♔e1 6 ♖a2! ♔d1 7 ♔a5! ♖a8+ 8 ♔b6 ♖b8+ 9 ♔c6 ♖c8+ 10 ♔b7 ♖h8 11 a4!, followed by playing the king back to h1 when Black starts checking from the side. However, based on our previous analysis, the simplest win is by 1 ♖d2 and now:

1) **1...♔e1** 2 ♖h2! ♔d1 (2...♖a8 3 ♔b2! is line B3 of diagram 173) 3 ♔b2! ♖b7+ 4 ♔c3! ♖c7+ 5 ♔b4 ♖b7+ 6 ♔c5 ♖a7 7 ♔b5 ♖b7+ 8 ♔a6 ♖g7 9 a4 ♖g6+ 10 ♔b5 ♖g5+ 11 ♔b4 and White wins by bringing his king back to b2 just as at the end of line B3 in diagram 173.

2) **1...♖a6** 2 ♔b2 ♖b6+ (2...♖a8 3 ♖d4 and the extra tempo of ♔b2 makes all the difference) 3 ♔c3 ♖a6 4 ♔b4 ♔e1 5 ♖h2 ♖b6+ 6 ♔c5 ♖a6 7 ♔b5 ♖a3 8 ♔b4 and wins as in diagram 173.

3) **1...♖a8** 2 ♖h2! puts Black in zugzwang.

Unfortunately there are few practical examples with ♖+♙a2 v ♖.



176 =/+

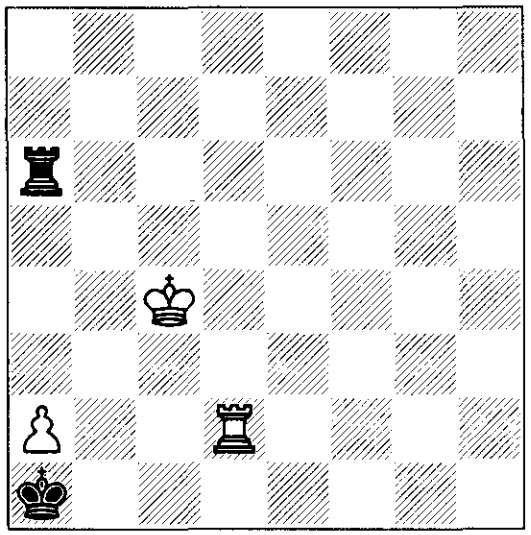
**Chandler – Barlov**

*Haninge 1988*

**(176):** Black to play would win by 1...h5! 2 ♔c4 h4! 3 ♖h7 (3 ♔d4 ♖a3 4 ♖f7+ ♔g4! 5 ♔e4 ♔g3! 6 ♖g7+ ♔f2! 7 ♖f7+ ♔g2 wins) ♔g4 4 ♖g7+ ♔f3 5 ♖f7+ ♔g2 6 ♖h7 ♖h1 7 ♖g7+ ♔f3 8 ♖f7+ ♔g4 9 ♖g7+ ♔f5 followed by ...h3. In the game White was to play and he held the draw by accurate defence: 1 ♔c4 h5 2 ♔d4 ♖a3 3 ♖f7+! (not 3 ♖h7? h4! winning) ♔g4 4 ♔e4! (4 ♖g7+? ♔f3! 5 ♖f7+ ♔g2 6 ♖g7+ ♖g3! 7 ♖h7 ♖g4+! and ...h4 wins for Black) ♔g3 5 ♖g7+! ♔f2 6 ♖f7+ ♔g2 7 ♖g7+ ♖g3 8 ♖h7 ♖g5 9 ♔f4 ♖a5 10 ♖b7 ♔h3 11 ♖b3+ ♔h4 12 ♖b1 ½-½.

There are equally few endgame studies.

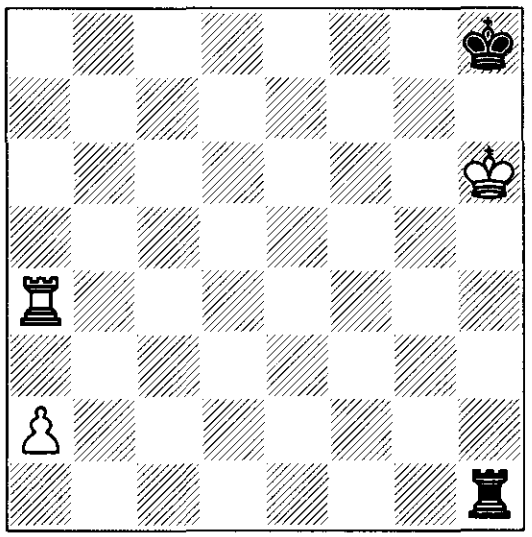
**(177):** 1 a4! (after 1 ♔b3 ♖b6+ White has to return to the c-file) ♖a8 (1...♖xa4+ 2 ♔b3) 2 ♔b4 ♖b8+ 3 ♔a3 ♔b1 4 a5 and White wins comfortably.



177 +/

*Prokeš, 1941*

We finish with the longest win (taking 'length' as the number of moves until pawn promotion, capture of the enemy rook or mate) in the ending of ♖+a♙ v ♖.



178 +/

*Original*

**(178):** White can promote his pawn in 51 moves with best play. The main line runs 1 ♔g6 (1 ♔g5? ♔g7 draws) ♖g1+ 2 ♔f7 ♖f1+ (2...♖g7+ 3 ♔f6 ♖g2 4 ♖h4+ ♔g8 5 a4 ♖a2 6 ♖b4 ♖a1 7 ♔e7 ♔g7 8 ♖g4+ ♔h6 9 ♔d6 ♔h5 10 ♖b4 ♔g6 11 ♔c6 and Black's king is too far away) 3 ♔e6 ♖e1+ (3...♔g7 4 ♖e4 ♔f8 5 ♔d7 cuts Black's king off) 4 ♔d6 ♖d1+ and now:

1) **5 ♔c5?** (tempting, but it throws away the win; 5 ♔c6? is equally bad and is met by the same move) ♖a1! ( 6 ♖h4+ (6 ♖a8+ ♔g7 7 a4 ♔f7 8 a5 ♔e7 9 a6 ♔d7 and the king arrives just in time) ♔g7! and now:

1a) **7 ♖h2** ♖f1! (a very tricky 'only move'; 7...♔f6? loses to 8 ♖e2! ♔f5 9 ♔b5 ♖b1+ 10 ♔a5 ♖b8 11 a4! ♔f6 12 ♔a6 ♖a8+ 13 ♔b5! ♖b8+ 14 ♔c6 ♖a8 15 ♖a2, while 7...♖e1? allows 8 ♖f2! ♖e4 9 ♔b5! ♖e5+ 10 ♔c4 ♖e4+ 11 ♔b3 ♖e3+ 12 ♔b2 ♖e4 13 ♖f3, followed by ♔b3 and a4, when Black's king is too far away to draw) 8 a4 (8 ♖e2 ♖f5+ 9 ♔d6 ♖a5 holds the draw, while 8 ♖h4 ♖a1! is similar to line 1b) ♖f5+! 9 ♔c4 ♖f4+! 10 ♔b3 ♖f3+! 11 ♔b2 ♔f7 draws.

1b) **7 a4** ♔f6! (7...♔f7? 8 ♖e4! wins) 8 ♔b5 (8 ♖e4 ♔f5!) ♔e7 and Black's king arrives back in time.

2) **5 ♔c7!** ♖a1 (5...♖c1+ 6 ♔b6 ♖b1+ 7 ♔a5 ♖b8 8 ♖h4+ ♔g7 9 a4! ♔f6 10 ♖e4! wins as in diagram 121) 6 ♖a6! (a very hard move to find; 6 ♖h4+ still leads to a draw as in line 1, but the combination of 5 ♔c7! and 6 ♖a6! forms a barrier to Black's king, while in many lines White is able to meet ...♖c1+ by ♖c6) and now:

2a) **6...♔g7** 7 a4 ♔f7 8 ♔d7!! (not 8 a5? ♔e7! 9 ♖a7 ♖c1+ followed by ...♔d6 drawing) with the branch:

2a1) **8...♖a2** 9 a5! ♖a1 10 ♖a7 ♔f6 (10...♖d1+ 11 ♔c8+ ♔e8 12 a6 ♖a1

13 ♖a8 ♔e7 14 ♔b7 ♖b1+ 15 ♔c6 ♖c1+ 16 ♔b5 and White's king returns to the second rank, having stranded Black's king outside the safety zone) 11 a6 ♔e5 12 ♔c6 ♖c1+ 13 ♔b7 ♖b1+ 14 ♔c7 ♖a1 (14...♖c1+ 15 ♔d8) 15 ♖a8 ♖c1+ 16 ♔b6 ♖b1+ 17 ♔c5 and again Black's king is stranded.

2a2) **8...♖d1+** 9 ♖d6! ♖a1 10 ♖d4 ♔f6 11 ♔d6 wins as in diagram 140.

2a3) **8...♖e1** 9 ♖b6 (9 a5? ♖e7+! 10 ♔c6 ♖e6+! 11 ♔b5 ♖e5+! 12 ♔b4 ♔e7 draws) ♖a1 10 ♖b4 is essentially the same as line 2a2.

2b) **6...♖g1** 7 ♖f6! (White plays to cut off Black's king on the f-file, but he needs to advance his pawn to a4 as well to be sure of the win; 7 ♖e6? ♖g4! 8 ♔b6 ♔g7 9 ♔b5 ♔f7 10 ♖e3 ♖g5+! 11 ♔b4 ♖g4+ 12 ♔b3 ♖g8 followed by ...♖e8 draws) ♖g4 (7...♖a1 8 ♖f2 ♔g7 9 ♔b6 ♔g6 10 ♔a5 followed by a4) 8 ♔b6 ♖a4 (8...♔g7 9 ♖f2! ♖e4 10 ♔b5 wins as in line 1a after 7...♖e1?) 9 ♖f2! (threat ♔b5) ♖a8 10 ♖g2 (it turns out that this is enough to win; not only is Black's king cut off on the h-file, but it is far from the drawing h5-square) ♔h7 11 ♔b5! ♖b8+ 12 ♔c4 ♖c8+ 13 ♔b3 ♖b8+ 14 ♔c3 ♖c8+ 15 ♔b2 ♖b8+ 16 ♔a1 ♖a8 17 ♖g1 (White's winning plan involves advancing his king again, followed by switching his rook behind the pawn with ♖a1, so he must spend a tempo on this move) ♖f8 (after 17...♔h6 White wins as in diagram 163; Black is one tempo short of reaching the drawing square h5) and now, as we mentioned after the analysis of diagram 166, where Black's king was on h6, White can win by 18 ♖g3. However, with the king on h7 there is a slightly faster win by 18 ♖g4 ♔h6 19 a3 ♔h5 20 ♖g2 ♔h4 (now we are in diagram 166) 21 ♔b2 ♖f4 22 ♔a2 ♖e4 23 ♔b3 ♖e3+ 24 ♔b4 ♖e4+ 25 ♔b5 ♖e5+ 26 ♔c6 ♖e6+ 27 ♔d5 ♖e1 28 ♖a2 ♖d1+ 29 ♔c4 ♖c1+ 30 ♔b3 ♖b1+ 31 ♖b2 ♖g1 32 a4 ♖g3+ 33 ♔b4 ♖g4+ 34 ♔b5 ♖g5+ 35 ♔a6 ♔g3 36 a5 ♔f4 37 ♔b6 ♖g6+ 38 ♔b5 ♖g5+ 39 ♔a4 ♔e4 40 a6 ♖g6 41 ♔a5 ♖g5+ 42 ♖b5 ♖g7 43 ♖b7 ♖g5+ 44 ♔b4 ♖g8 45 a7 ♖a8 46 ♔c5 ♔f5 47 ♔b6 ♖e8 48 ♖b8 ♖e6+ 49 ♔a5 and White promotes his pawn in two more moves.

Diagrams 169 and 173 are the only positions of reciprocal zugzwang in the ending of ♖+♙a2 v ♖.

**Practical tips:** Diagrams 163-166 are the most important, but owing to the great complexity of this ending I believe that even Kasparov would have a hard time finding the right move in many positions.

# 2 ♖+b♙ v ♖

White's winning chances are much better with the b-pawn than with the a-pawn. The main reason for this is that positions with the white king in front of the pawn are always winning if the pawn is sufficiently far advanced. As before, we divide up this chapter according to the pawn's rank.

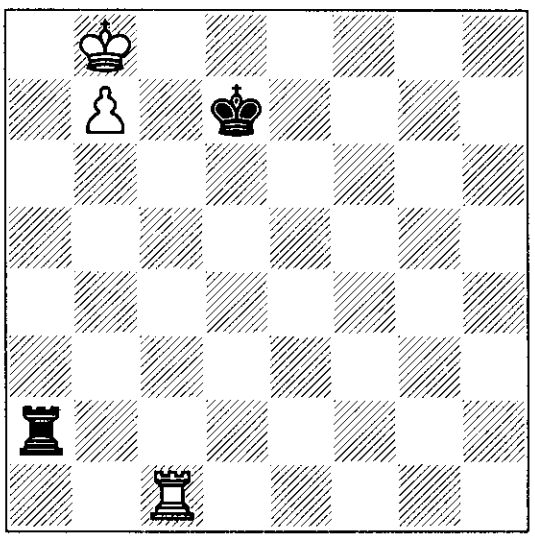
## 2.1: Pawn on the seventh rank

We adopt a classification scheme similar to that in section 1.1:


2.1.1: White's king is in front of the pawn 111
2.1.2: White's rook is in front of the pawn 112
2.1.3: White's rook is behind the pawn 114
2.1.4: White's rook defends the pawn from the side 115


### 2.1.1: White's king is in front of the pawn

The situation with the pawn on the 7th rank and the king in front of it is extremely common, and we call it the Lucena position (although it is really a class of positions rather than a particular one). In the case of the b-pawn White always wins, except for a few exceptional positions where he loses the pawn immediately.



179 +/–

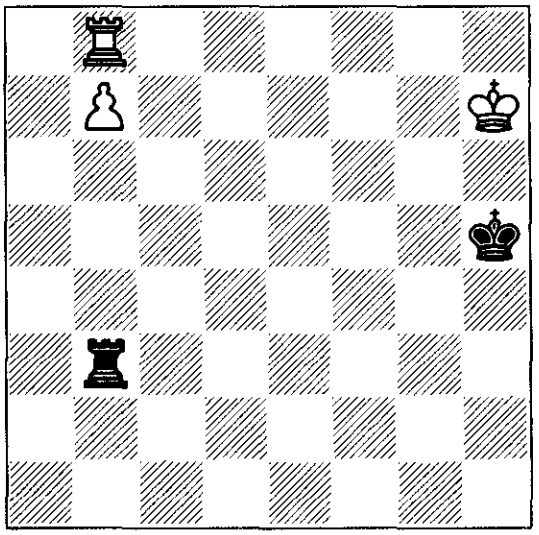
*Salvio, 1634*

**(179):** We take Black to play, although it makes no real difference. After 1...♖a3 (1...♖h2 2 ♖a1 followed by ♔a7 wins) 2 ♖d1+ ♔e7 (or 2...♔e6 3 ♔c7 ♖c3+ 4 ♔d8 ♖b3 5 ♖d7 ♖b1 6 ♔c8 followed by ♖c7 and b8♕) 3 ♖d4 (this winning method is usually described as 'building a bridge'; White prepares a rook interposition on the fourth rank) ♖a1 4 ♔c7 ♖c1+ 5 ♔b6 ♖b1+ 6 ♔a6 (threat 7 ♖a4, followed by ♔a7) ♖a1+ 7 ♔b5 ♖b1+ 8 ♖b4! White shields his king and promotes the pawn. If Black plays 1...♖a4 to

prevent White's bridge-building manoeuvre, then White wins by 2 ♖d1+ ♔e7 3 ♔c7 ♖c4+ 4 ♔b6 ♖b4+ 5 ♔a6 ♖b2 (5...♖a4+ 6 ♔b5 ♖a2 7 ♖b1 wins) 6 ♖a1, followed by ♔a7 and the pawn promotes.

### 2.1.2: White's rook is in front of the pawn

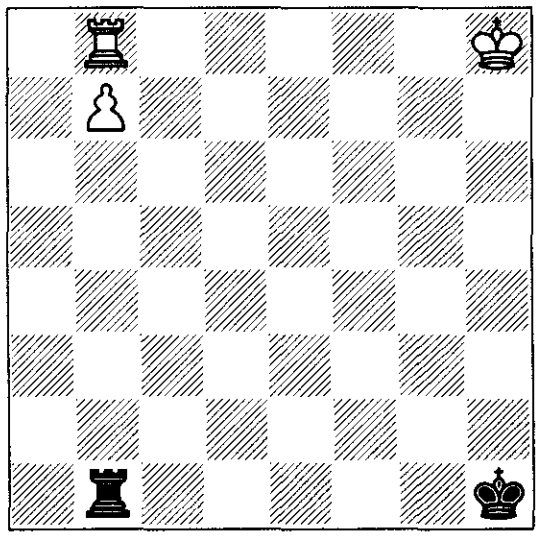
This case has received little attention in chess literature even though it is quite interesting. Many of the conclusions from section 1.1.2 transfer to this situation so we only emphasize the differences. Diagram 9 shifted to the right (W♔h7, ♖b8, ♙b7 v B♔h5, ♖b1) is still a draw, but if we move Black's rook up the board slightly it becomes a win, even though the corresponding position with the a-pawn is a draw.



180 +/=

*Original*

**(180):** White to play wins by 1 ♔g7! ♔g5 2 ♔f7! ♔f5 3 ♔e7! ♔e5 4 ♔d7! ♔d5 5 ♔c7! ♖c3+ 6 ♔b6! ♖b3+ 7 ♔a6! (White makes use of the a-file; 7 ♔a5? ♔c6 draws) ♖a3+ 8 ♔b5! ♖b3+ 9 ♔a4! ♖b1 10 ♖d8+! ♔c4 11 ♖c8+! and 12 b8♕. If Black's rook is on b1 or b2 in the initial position then the result is a draw because near the end of the above line Black's rook is not attacked and he can play 9...♔c6. Therefore Black to play can draw in diagram 180 by 1...♖b1.



181 +/=

*Prokeš, 1941*

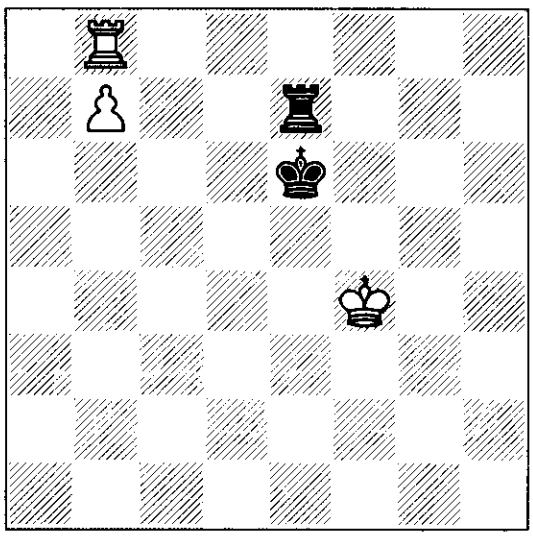
**(181):** White to play wins by 1 ♔g7 ♔g2 2 ♔f6 ♔f3 3 ♔e5 ♔e3 4 ♔d5 ♔d3 5 ♖d8, so the position is only interesting with Black to move. Black draws by 1...♖b6! (1...♔h2? 2 ♔g7 wins as with White to play; Black must use his free move to confine White's king to the back two ranks) 2 ♔g7 ♔g2! 3 ♔f7 ♔f3! 4 ♔e7 ♔e4! 5 ♔d7 ♔d5! 6 ♔c7 ♖c6+! 7 ♔d8 ♖b6 8 ♔d7 ♖b1 with a draw by the comments at the end of diagram 180.

Diagram 10 shifted to the right (W♔h6, ♖b8, ♙b7 v B♔h4, ♖b1) is still +/= for the same reasons. Shifting

diagram 11 (W♔d7, ♖g8, ♙g7 v B♔g4, ♖g6) makes no difference; it is +/=, with White to play winning by 1 ♔e8!. The reciprocal zugzwang given in diagram 11 also holds when shifted (W♔e7, ♖g8, ♙g7 v B♔g5, ♖g6).

The next group of positions (diagrams 12-14) are completely different with the b-pawn. The defensive plan of having the black rook on the same file as Black's king no longer works when White's king is on the queenside, for example shifting diagram 13 to the right gives W♔b1, ♖b8, ♙b7 v B♔g2, ♖g7 and here White wins by 1 ♔c2 ♔g3 2 ♔d3 ♔g4 3 ♔d4 ♔g5 4 ♔c5 ♔g4 5 ♔b6 ♖g6+ 6 ♔a7, followed by moving the rook. It follows that Black's only possible defence is to have his king near enough to the b-file to have a chance of winning the white pawn. Thus diagram 16 shifted (W♔f4, ♖b8, ♙b7 v B♔f6, ♖f7) is lost, even with Black to move, but diagram 17 shifted (W♔e4, ♖b8, ♙b7 v B♔e6, ♖e7) is still +/=, because the draw with Black to move involves attacking the pawn by 1...♔d6+ and 2...♔c7.

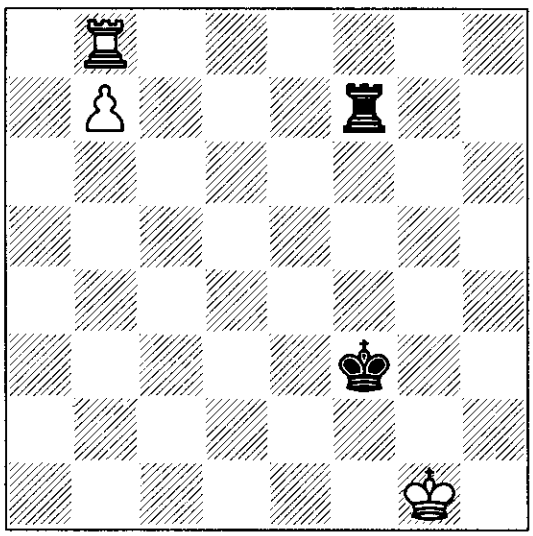
**(182):** This is diagram 18 shifted. With Black to play, White wins after 1...♖f7+ 2 ♔e4 ♖e7 (2...♔f6 3 ♔d4 ♔f5 4 ♔d5 and wins) 3 ♔d4 ♖d7+ 4 ♔c5! (White must prevent ...♔d6 and ...♔c7) ♖e7 5 ♔b6 and wins. White to play can force Black to defend accurately, but he cannot win: 1 ♔g4 (1 ♔e4 ♔d6+ and 2...♔c7 draws, and 1 ♔f3 is met by 1...♔e5!) ♔e5! (and not 1...♖g7+? 2 ♔f3! ♖e7 3 ♔f4!) 2 ♔f3 (2 ♔g5 ♖g7+!) ♖f7+! 3 ♔e3 (it looks



182 =/–

*Original*

as though White's king has managed to cross to the queenside, but Black can still defend) ♖e7! 4 ♔d3 ♖d7+! 5 ♔c4 ♔d6! followed by ...♔c7 with a draw.



183 =/–

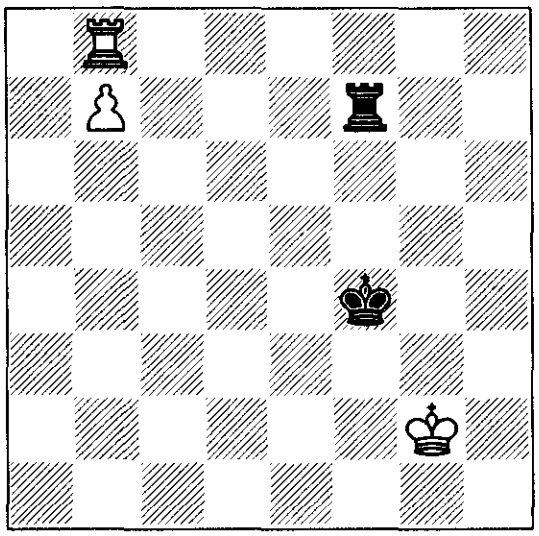
*Original*

**(183):** This zugzwang has no parallel in the case of the a-pawn, because such positions are always drawn with an a-pawn. Here, however, Black to play loses:

1) **1...♖g7+** 2 ♔f1! (but not 2 ♔h1? ♖h7+! 3 ♔g1 ♖f7! and it is now White to move) and after 2...♖f7 3 ♔e1 or 2...♔g4 3 ♔e2 White's king escapes to the queenside, which guarantees a win with the b-pawn.

2) **1...♔f4** 2 ♔g2 (2 ♔f2? ♔e5+ 3 ♔e3 ♖e7 draws as in the previous diagram) ♔f5 3 ♔g3 ♖g7+ (or 3...♔f6 4 ♔f4 ♔e6+ 5 ♔e4 ♖e7 6 ♔d4, winning) 4 ♔f3 ♖f7 5 ♔e3 reaching the queenside.

With White to play the position is a draw after 1 ♔f1 (1 ♔h2 ♖h7+ and 2...♖f7) ♔e4+ 2 ♔e2 ♖e7, just as in the analysis of diagram 182.

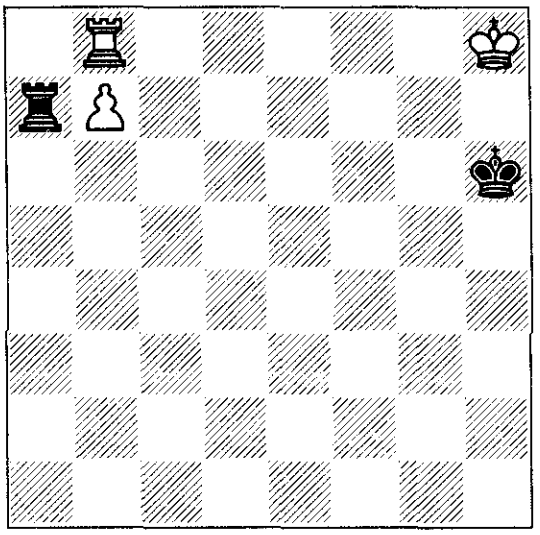


184 +/–

*Original*

**(184):** This position arose with Black to play in the previous diagram. However it is also a win with White to play: 1 ♔h2 (1 ♔h1 is just as good) ♔f3 (1...♖h7+ 2 ♔g1! ♖f7 3 ♔g2 wins) 2 ♔g1! reaching diagram 183 with Black to move.

The following position also has no parallel with the a-pawn.



185 =/–

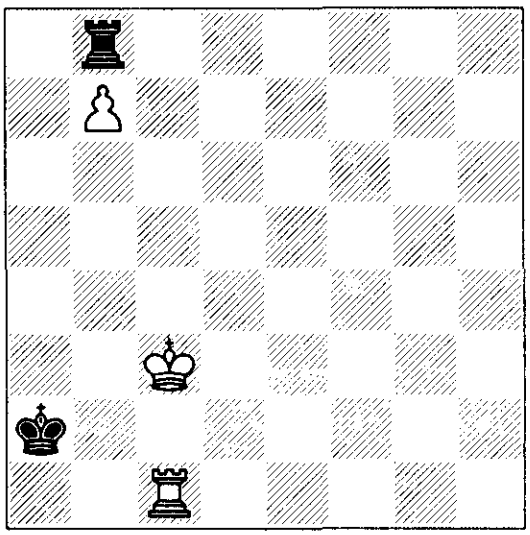
*Original*

**(185):** The queenside position is one of mutual paralysis, so everything depends on the kings. The result is effectively the same as the opposition in a king and pawn ending. With Black to play, White wins by 1...♔h5 2 ♔g7 followed by marching to the queenside. White to play cannot win since Black just keeps opposing White's king. The same reciprocal zugzwang can occur with the kings on the e-, f- or g-files.

## 2.1.3: White's rook is behind the pawn

This case is relatively uninteresting. There isn't even the excitement of the mating trick from diagram 21, so that diagram 22 shifted to the right (W♔c5, ♖b1 v B♔f2, ♖b8, ♙b2) is reduced to a matter of counting. The result is still =/–, but White to play can draw by simply winning the pawn.

**(186):** 1 ♖c2+! ♔a1 (1...♔a3 2 ♖b2 and White's king just marches up the



186 +/

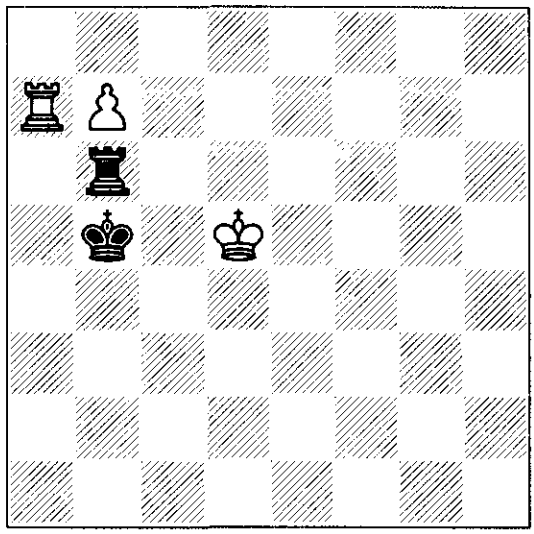
*Gerasimov, 1979*
*Commendation, Tidskrift för Schack*

board) 2 ♖b2! ♖c8+ (after 2...♖h8 White can promote as there is no perpetual check, but 3 ♖b5 is more clear-cut) 3 ♔d2 ♖d8+ (3...♖g8 is tricky, because after 4 b8♕? there is now a perpetual check; therefore 4 ♖b5 is to be preferred) 4 ♔c1 ♖c8+! 5 ♖c2! ♖b8 (the next move is ♖c8 in any case) 6 ♖c8! ♖xb7 7 ♖a8+ and White mates.

## 2.1.4: White's rook defends the pawn from the side

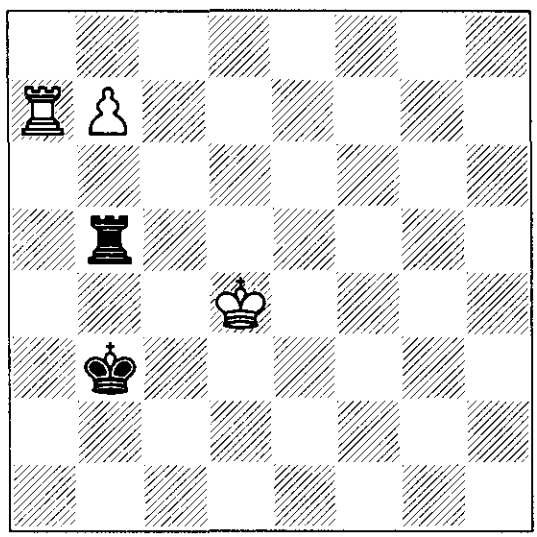
The most interesting case. First of all we suppose that Black's rook is in front of the pawn, on b8. Most of the basic conclusions from section 1.1.4 carry over to this situation. The reciprocal zugzwang mentioned in diagram 22 still holds when it is shifted to the right (W♔d7, ♖c7, ♙b7 v B♔d5, ♖b8) and moving diagram 25 to the right (W♔f7, ♖e7, ♙b7 v B♔f5, ♖h8) also maintains the reciprocal zugzwang.

However there are a number of interesting positions when the black rook is behind the pawn. Most of these reduce to one of the following two reciprocal zugzwangs.



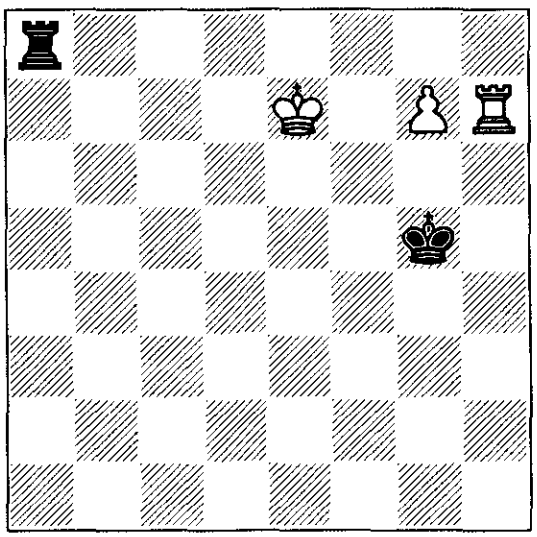
187 =/–

**(187):** White to play loses the pawn immediately, as any king move allows ...♔c6. With Black to play White wins by 1...♔b4 2 ♖a1 ♔c3 (2...♖b5+ 3 ♔d4 is simplest) 3 ♖c1+ ♔d3 4 ♖c7! followed by ♔c5 and marching the king to c8.



188 =/–

**(188):** With Black to play, 1...♔b4 (any other king move allows ♔c4 and a rook move on the b-file allows ♔c5) 2 ♖a1 is an instant win. With White to play 1 ♔d3 (1 ♔e4 ♔c4 followed by ...♖b6 and ...♔c5-c6 wins the pawn, but not ...♔c5 before ...♖b6 due to ♖a5) ♖b4 (or 1...♖b6, but not 1...♔b4? 2 ♖a1! ♔c5 3 ♖a5!) 2 ♔d2 (2 ♔e3 ♔c3) ♖b6 and White has nothing better than 3 ♔d3.

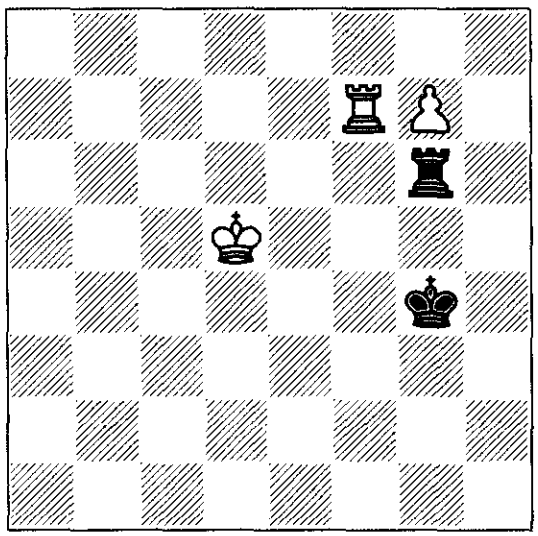


189 +/

*Dedrle, 1917*
*(end of study; version)*

**(189):** 1 ♔f7! (not 1 ♖h8? ♖a7+! 2 ♔f8 ♖a8+! with perpetual check, while other moves fail to meet the threat of ...♔g6) ♖a7+ 2 ♔e6! ♖a6+ (2...♖a8 3 ♖h8) 3 ♔d5! (not 3 ♔e5? ♖g6! when White is in zugzwang) ♖g6 (3...♖a5+ 4 ♔c4 ♖a4+ 5 ♔b5 ♖a8 6 ♖h8) 4 ♔e5! reaches diagram 187 with Black to move.

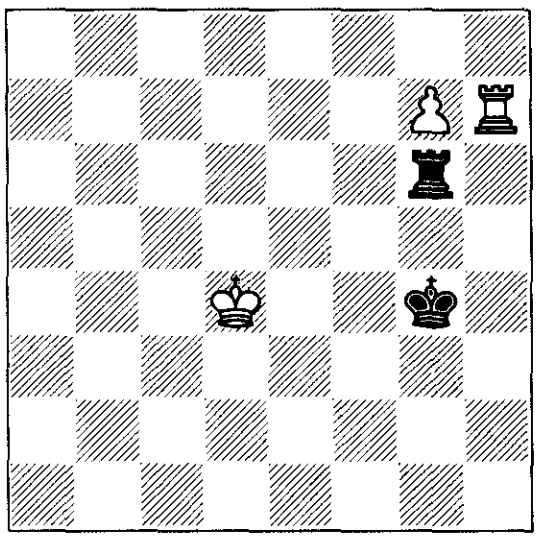
**(190):** 1 ♖f1! (Black threatens to play 1...♔g5 followed by 2...♔h6, so White must take immediate action; 1 ♖f2? ♔h3! 2 ♖f7 ♔h4! 3 ♔e5 ♔g5 is a draw) ♔h3 (the only move to avoid immediate loss) 2 ♖h1+! ♔g2 3 ♖h7! ♔f3 (3...♔g3 is the same) 4 ♔e5! ♔g4 5 ♖h1 (we have transposed into diagram 187 after Black's first move) ♔f3 6 ♖f1+ ♔e3 7 ♖f7! and wins. It is curious that White's rook moves f7-f1-h1-h7-h1-f1-f7 during the solution.



190 +/

*Kleiman, 1968*
*Chess Life and Review*

In the following position exactly the reverse tour takes place:



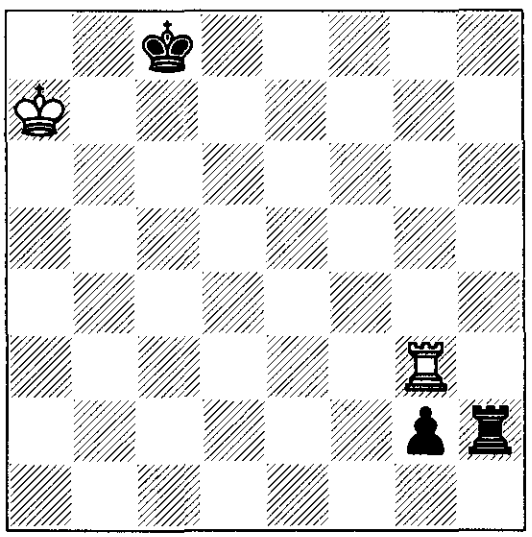
191 +/

*Grigoriev, 1938 (end of study)*

**(191):** 1 ♔e4! (not 1 ♔e5? ♔g5! reaching diagram 187 with White to move, nor 1 ♖h1? ♔f5) ♖e6+ (1...♔g5 2 ♔e5! is zugzwang) 2 ♔d5! ♖g6 3 ♖h1! ♔f3 (now that White's king is on d5, Black cannot reply ...♔f5; 3...♔f4 4 ♖f1+! ♔e3 5 ♖f7 followed by ♔e5-f5 is an easy win) 4 ♖f1+! ♔g2 5 ♖f7! (threat ♔e5) ♔g3 6 ♔e5! (not 6 ♔e4? ♖g5!) ♔g4 (6...♔h4 7 ♔f5! ♔h5 8 g8♕ wins) 7 ♖f1! ♔h3 8 ♖h1+! ♔g2 9 ♖h7! followed by ♔f5 and White wins.

These two positions may appear very confusing, but the simple point is that when Black's king is on g4 and White's king is sufficiently close, both the rook transfers ♖h7-h1-f1-f7 and ♖f7-f1-h1-h7 gain a tempo. In diagrams 190 and 191, White employs these manoeuvres twice.

We finish this section with a few positions in which tactical elements predominate.



192 =/+

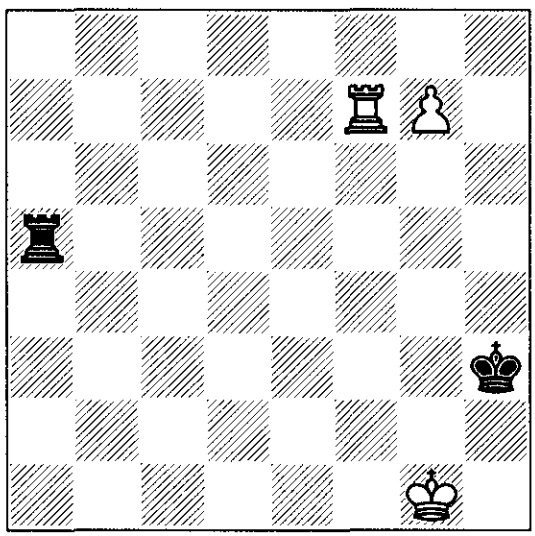
*Wotawa, 1941*
*(end of study; version)*

**(192):** With White to play there are two possibilities:

1) **1 ♔b6?** ♔d7! 2 ♔c5 (2 ♖g6 ♖h6) ♔e6! 3 ♔d4 ♔f5! 4 ♖g8 (4 ♔e3 ♖h3 wins) ♔f4! and Black quickly reaches the Lucena position.

2) **1 ♖g7!** ♔d8 (the tactical justification for White's play is 1...♖h7 2 ♔a8!; after 2...♖h1 White starts checking and only takes the pawn when the mating threat has gone) 2 ♔b6! ♔e8 3 ♔c5 ♔f8 4 ♖g3! ♔f7 5 ♔d5 followed by ♔e4 and ♔f3.

When Black is to play, 1...♔c7 2 ♔a6 ♔d6 wins easily.

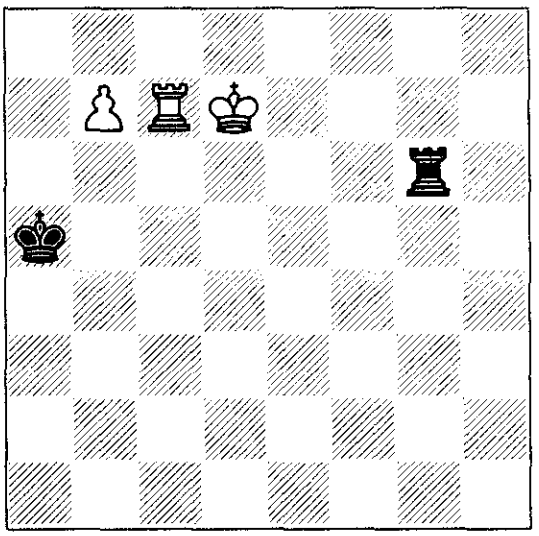


193 /–

*Amirian, 1985 (end of study)*
*2nd Special HM, (version)*
*Ceskoslovensky Sach*

**(193):** 1...♖g5+ 2 ♔h1! (2 ♔f2? ♔g4 draws after 3 ♖f3 ♔h4! 4 ♖f4+ ♔h3! or 3 ♔e3 ♖g6 4 ♖f1 ♔h3! 5 ♖h1+ ♔g2! 6 ♖h7 ♔g3 7 ♔e4 ♖g5! reaching diagram 188 with White to move) ♔h4 (the threat was 3 ♖f2, and 2...♔g3 3 ♖f1! transposes) 3 ♖f4+! (3 ♔h2 ♖g6! followed by ...♔h5-h6)

♔g3 4 ♖f1! ♖h5+ 5 ♔g1! ♖g5 6 ♖f2! ♔h3+ 7 ♔h1! and wins.



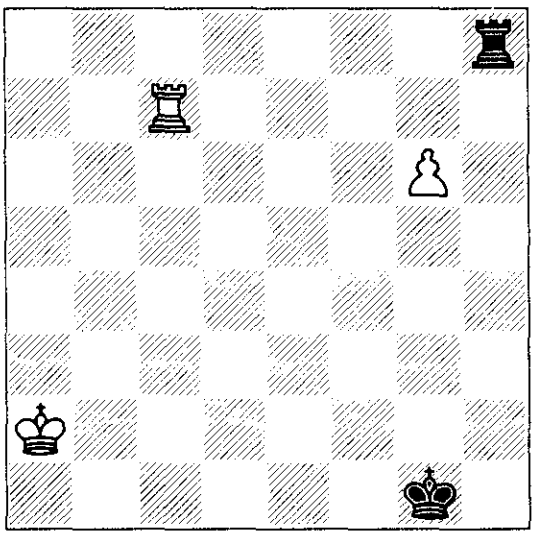
194 /–

*Kopaev, 1958*

**(194):** 1...♖g7+ 2 ♔c6 (2 ♔d6 is the same) ♖g6+ 3 ♔c5 (3 ♔d5? ♖b6! 4 ♔c5 ♖b5+! draws after 5 ♔c4 ♖b1 or 5 ♔c6 ♔a6! followed by ...♖b6+) ♖g5+ 4 ♔c4 (or 4 ♔d4) ♖g4+ 5 ♔c3! ♖g3+ (5...♖b4 6 ♖c5+!) 6 ♔b2 ♖g2+ 7 ♖c2 ♖g8 8 ♖c8! and wins.

I have saved the best for last:

**(195):** 1 g7! (not 1 ♔b3? ♖h5 2 g7 ♖g5 3 ♔c4 ♔g2 4 ♔d4 ♔g3 5 ♔e4 ♔g4! 6 ♖c1 ♔h3! 7 ♖h1+ ♔g2! 8 ♖h7 ♔g3! reaching diagram 188 with White to move) ♖b8 (Black seeks to prevent the march of White's king to f7; other moves lose more quickly) 2 ♖b7! (2 ♖f7? ♖g8! 3 ♔b3 ♔g2 4 ♔c4 ♔g3 5 ♔d5 ♔g4 6 ♔e6 ♔g5 and Black is just in time) ♖c8 3 ♔b3! ♔g2 4 ♖c7! (the same idea again) ♖d8 (Black tries his best, but to no avail) 5 ♔c4! ♔g3 6 ♖d7! ♖e8 7 ♔d5! ♔g4 8 ♖e7! (the fourth and last rook offer) ♖g8 9 ♔e6! followed by ♔f7.



195 +/

*Gurgenidze, 1981*
*1st Prize, Shakhmaty v SSSR*

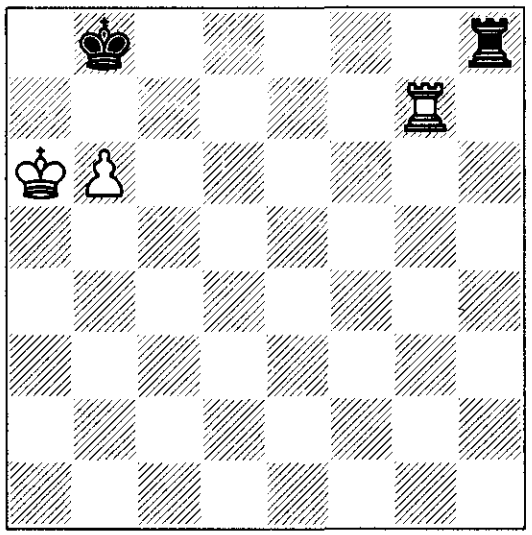
It is interesting to note that White wins in more or less the same way if his rook starts on a7, b7 or d7. However, if his rook starts on the unfavourable square e7, Black can draw by 1 g7 ♖h2+! 2 ♔b3 ♖g2! 3 ♔c4 (with his rook on d7, White could win here by ♖d1+ followed by ♖d2) ♖g5! 4 ♔d4 ♔g2 5 ♔e4 ♔g3!.

There are 11 positions of reciprocal zugzwang with ♖+♙b7 v ♖. Eight of these are diagrams 181, 182, 184 (and three related positions), 187 and 188. Two more were mentioned at the start of section 2.1.4 and one after diagram 180.

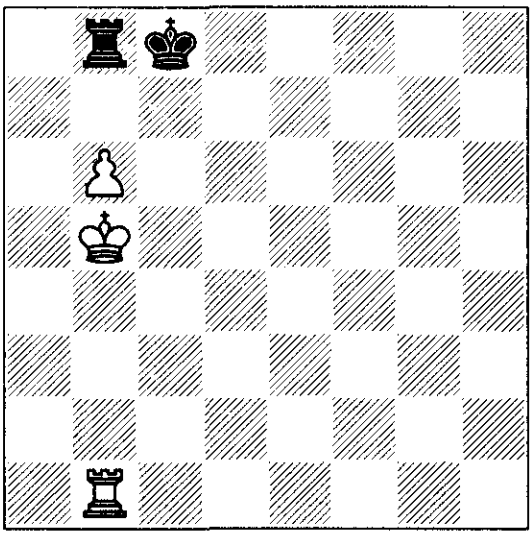
**Practical tips:** Many positions are just a matter of counting, and others are very similar to the corresponding positions with the a-pawn. Important new ideas may be found in diagrams 179 (the Lucena position, which has immense practical importance), 183, 187 and 188.

## 2.2: Pawn on the sixth rank

We start with a couple of elementary observations. Firstly, if Black manages to bring his king is front of the pawn, the result is almost always a draw. Even in the following very favourable position, White has no winning chances at all:



196 =/=



197 /–

**(196):** Black simply moves his rook back and forth along the eighth rank. If White plays ♖b7+ Black replies ...♔a8 (not ...♔c8 allowing ♔a7). White only has winning chances if Black's pieces are horribly placed, as in the next example.

**(197):** White to play wins by 1 ♖h1 (but not 1 ♔c6? ♖b7! 2 ♖h1 ♖c7+! drawing) ♔d7 (1...♔b7 2 ♖h7+! ♔c8 3 ♔c6 wins) 2 ♖h7+ ♔d6 3 b7 followed by ♔b6-a7. However, moving the rook from b8 to a8 changes the result: after 1 ♔c6 ♖a2 or 1 ♖h1 ♖a2 Black activates his rook and holds the game.

The other elementary point is that if White's king is in front of the pawn on b7 then Black cannot prevent White from edging his king to b8 and pawn to b7, giving the Lucena position. Therefore this situation is always a win apart from a few exceptional positions, so we do not need to cover it in any detail.

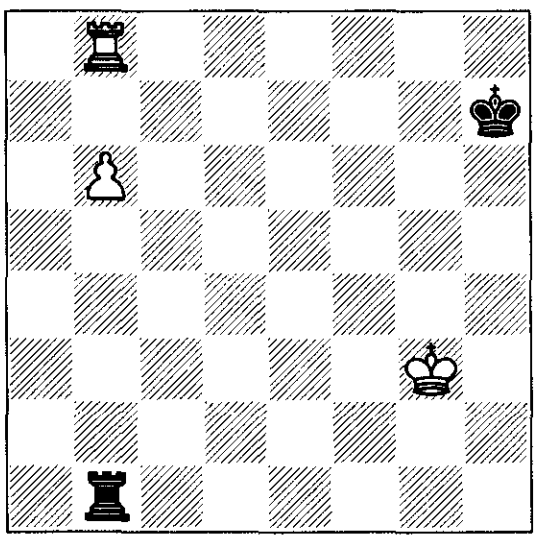
We make a subdivision:

2.2.1: White's rook is in front of the pawn 120
2.2.2: Black's king is cut off along a file 123
2.2.3: Other situations 124

There are several interesting positions in this section, but most of the situations which arise in practice are fairly straightforward. With a b-pawn, the real complexity only appears when the pawn is further back.

## 2.2.1: White's rook is in front of the pawn

There is a fundamental difference between this section and section 1.2.2. With a pawn on a6 and a White rook on a8, Black's king is trapped in the top right-hand corner, but with the pieces on the b-file this is no longer the case. If Black plays ...♔f7 and ...♔e7, then the reply b7 may be met by ...♔d7 and Black's king is close enough to round up the pawn. Therefore the Romanovsky subtleties are absent from this section; most positions are simply a race between the two kings. If White's king can support the pawn then he wins, but if not then Black can attack the pawn with his king and the position is a draw. The following position is a borderline case.

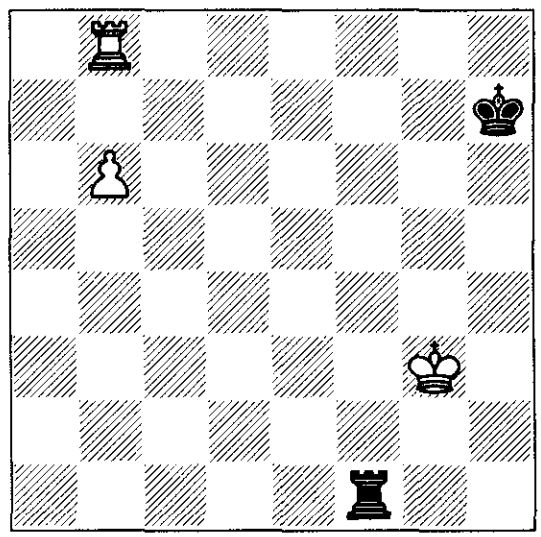


198 +/=

*Fine, 1941*

**(198):** White to play wins by 1 ♔f4! ♖b5 (after 1...♔g6 2 ♔e5 White supports the pawn even more quickly) 2 ♔e4 ♔g7 3 ♔d4 ♔f7 4 ♔c4! ♖b1 5 ♔c5 ♔e7 6 ♔c6! ♖c1+ 7 ♔b7 (the king is in front of the pawn and White can reach the Lucena position) ♖b1 8 ♖c8 ♔d7 9 ♖c2 ♖b3 10 ♔a7 ♖a3+ 11 ♔b8 ♖b3 12 b7 and we have diagram 179.

Black to play draws by 1...♔g6 2 ♔f4 ♔f6 3 ♔e4 (3 b7 ♔g7 draws) ♔e6 4 b7 (or else simply ...♔d6 and ...♔c6) ♔d7 followed by ...♔c7.



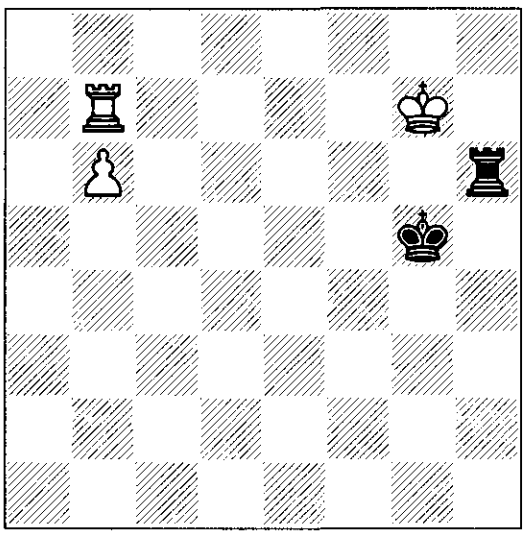
199 +/=

*Original*

**(199):** If Black's rook is not behind the pawn, then Black's king is confined to the top right corner, for example if Black were to play 1...♔g7 2 ♔g4 ♔f7 in the diagram then 3 b7 would win immediately. However, Black can draw by 1...♖f5! 2 ♔g4 ♖b5! (this accurate manoeuvre holds White's king up just long enough for Black to draw) 3 ♔f4 ♔g7 4 ♔e4 ♔f7 5 ♔d4 ♔e7 6 ♔c4 ♖b1 7 ♔c5 ♔d7!.

However, if White is to move, then 1 ♔g4! (preventing ...♖f5-b5, thus Black's rook must stay on the f-file) ♔g7 2 ♔g5! (threat 3 ♖b7+ ♔f8 4 ♖c7

followed by b7 promoting the pawn) ♖b1 (the only defence, but now White can push the black king onto the back rank) 3 ♔f5 (threat ♔e6) ♔f7 4 ♖b7+! (not 4 ♔e5? ♔e7! 5 ♖b7+ ♔d8! 6 ♔d6 ♔c8 drawing) ♔e8 5 ♔e6! ♖e1+ 6 ♔d6 ♖d1+ 7 ♔c7! ♖c1+ (7...♖d7+ 8 ♔c6) 8 ♔b8! ♖b1 (after 8...♖c6 9 ♔a7 the rook escapes) 9 ♔c8 (if White can free his rook, then the Lucena position is inevitable) ♖b2 (or 9...♖c1+ 10 ♖c7 ♖d1 11 ♖c5 and the pawn advances) 10 ♖b8 (this is the right idea; White swaps over his king and rook) ♔e7 11 ♔b7 wins as in diagram 198.



200 =/–

*Original*

**(200):** It's reciprocal zugzwang time again. First suppose that Black is to move:

1) **1...♖c6** 2 ♔f7 ♔f5 (after 2...♖h6 3 ♔e8! the white king can support the b-pawn) 3 ♔e7 ♔e5 (3...♖h6 4 ♔d7 is easy) 4 ♔d8! (not 4 ♔d7 ♔d5! 5 ♖b8 ♔c5 6 b7 ♖d6+! 7 ♔e7 ♔c6! drawing) ♖h6 (there isn't much choice because White threatened a rook check followed by b7) 5 ♔c7 ♔d5 6 ♔b8 ♔c6 7 ♔a7! (threat ♖c7+ and b7) ♔b5 8 ♖g7 and the pawn advances.

2) **1...♖d6** 2 ♔f7 ♔f5 3 ♔e8! (just as above, 3 ♔e7? ♔e5 fails) and Black is in even worse trouble than in line 1 as 3...♖h6 loses to 4 ♖f7+ and 5 b7.

3) **1...♖e6** 2 ♔f8! as before.

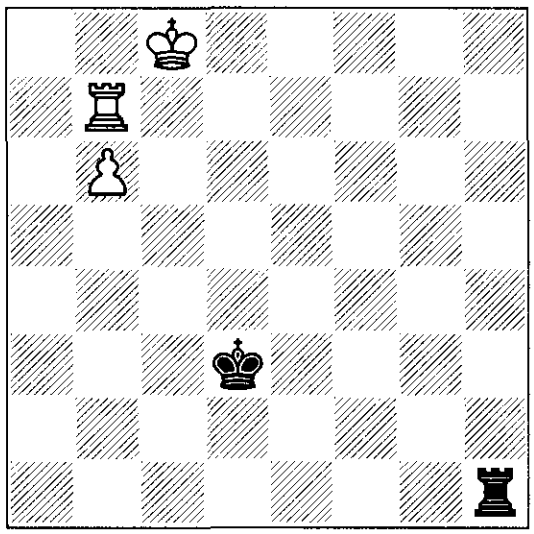
4) **1...♖f6** 2 ♔g8! (this should be no surprise by now) ♖d6 3 ♔f8! as in line 3.

5) **1...♖g6+** 2 ♔f8! (2 ♔f7? ♔f5! 3 ♔e8 ♔e6 4 ♖e7+ ♔d6! is a draw) ♔h6 3 ♔e8 and the king crosses to the queenside.

6) **1...♔h5** 2 ♔g8 ♖g6+ 3 ♔f7 ♔g5 4 ♔e8! is similar.

With White to play, 1 ♖b8 (1 ♔g8 ♔f5 draws, but not 1...♔f6? 2 ♖h7 ♖g6+ 3 ♔f8! winning) ♖c6 2 ♔f7 (2 b7 is met by 2...♖c7+ or 2...♖b6) ♔f5 3 ♔e7 ♔e5 4 ♔d7 ♔d5! 5 ♖b7 ♖h6 leads to a draw.

If the initial position is unfavourable for White, Black can sometimes draw using lateral checks.

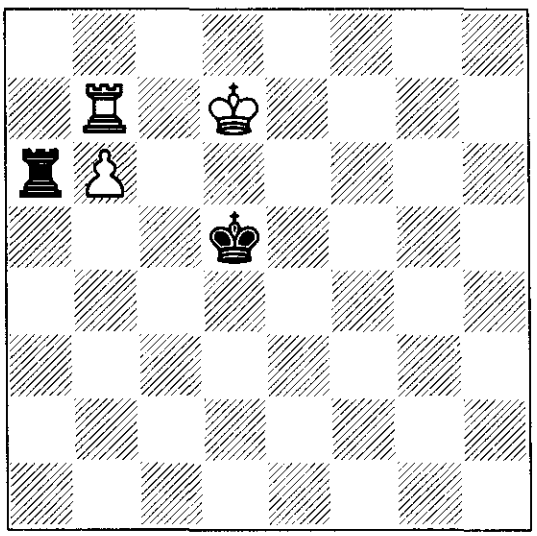


201 /=

*Mandler, 1955 (version)*

**(201):** After 1...♖h8+! 2 ♔c7 (or 2 ♔d7 ♔c4!) ♔c4! 3 ♖b8 (3 ♖a7 ♖h7+! 4 ♔c6 ♖h6+! 5 ♔b7 ♔b5! with an immediate draw) ♖h7+! 4 ♔c6 ♖h6+! 5 ♔b7 ♔b5! 6 ♔a7 ♔a5! White cannot make any progress. However, this draw depends on the poor initial position of White's king. If we start with the king on d6 instead of c8 then White wins by 1...♖h6+ 2 ♔c5 ♖h5+ 3 ♔c6 ♖h6+ 4 ♔b5 ♖h5+ 5 ♔a6 and so on.

Reciprocal zugzwang can also occur when Black's rook is on the other side of White's pawn.



202 =/–

*Original*

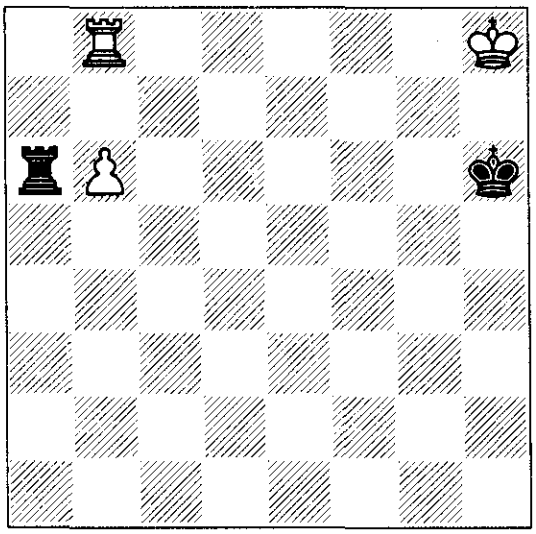
**(202):** With Black to play, White wins by 1...♔c5 (1...♖a8 2 ♖a7 followed by ♖a5+ and b7) 2 ♔c7! (this is also reciprocal zugzwang) ♔b5 3 ♖b8! (a third reciprocal zugzwang arises) ♖a1 (3...♔c5 4 ♖h8 wins) 4 ♖h8 (the threat is 5 b7) ♖c1+ 5 ♔b7! ♖c5 6 ♖h1 followed by ♖b1+ with an easy win.

When White is to move, 1 ♔c7 (1 ♖b8 ♔c5! 2 ♔c7 is the same) ♔c5! 2 ♖b8 ♔b5! 3 b7 (what else?) ♖c6+ 4 ♔d7 (4 ♔d8 ♔b6) ♖b6! reaches yet another reciprocal zugzwang, but with White to move (see comments after diagram 181).

It is worth noting that if we move the kings to the e-file in the above diagram, then White wins whoever is to move. With Black to play, 1...♔d5 2 ♔d7 is diagram 202 and with White to play 1 ♔d8! (threat ♖e7+ and b7) ♖a8+ 2 ♔c7 ♖h8 3 ♖a7 wins.

Diagram 64 shifted to the right (W♔f4, ♖b8, ♙b6 v B♔f6, ♖e7) gives another reciprocal zugzwang.

Diagram 185 gives rise to a corresponding set of positions with the pawn on the sixth.



203 =/–

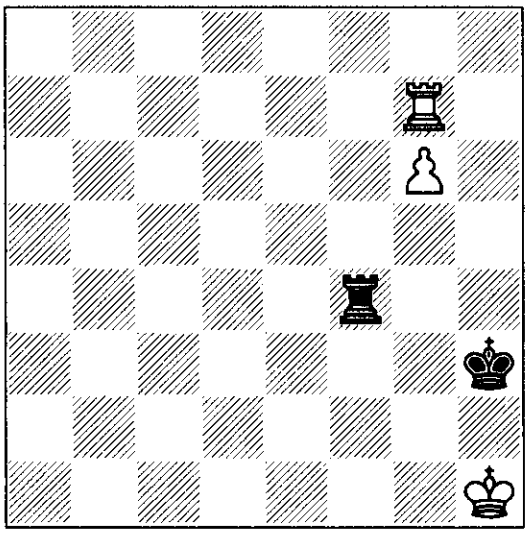
*Original*

**(203):** With Black to play, 1...♔g6 (1...♖a1 2 ♖d8 ♖b1 3 ♖d6+! ♔g5 4 ♔g7 ♔f5 5 ♔f7 ♔e5 6 ♔e7! ♖h1 7 ♔d7 wins) 2 ♔g8! (2 b7? ♖b6! draws because 3 ♖g8+ ♔f7! threatens mate; after 2 ♔g8! we have a second reciprocal zugzwang) ♖a1 (2...♔f6 loses

quickly to 3 b7 followed by ♖f8+, although 3 ♔f8 with a third reciprocal zugzwang is also possible) 3 ♖d8 and wins as in the note to Black's first move.

Finally we must mention the trivial case of W♔b8, ♖b7, ♙b6 v B♔d8, ♖a6, which is the final reciprocal zugzwang with White's rook in front of the pawn.

Sharp play can result if White's king is badly placed.



204 =/

a) Diagram *(I.Zaitsev, 1984);* White to play: Draw

b) Move W♔ to g1 *(I.Zaitsev, 1984);* White to play: Draw

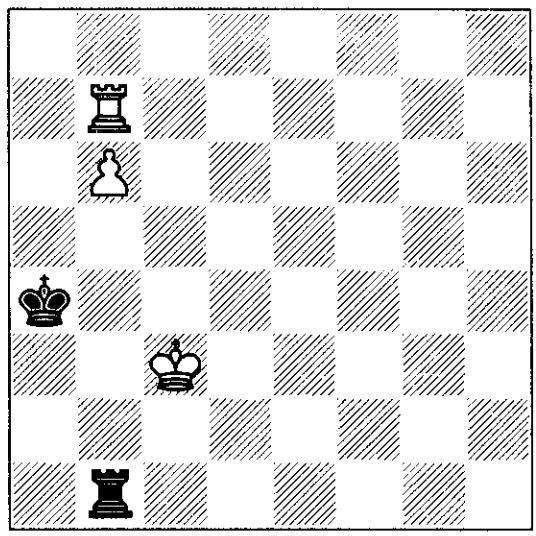
c) Move B♖ to f5 and W♔ to h1 *(Richter, 1953);* White to play: Win

**(204):** a) After 1 ♖f7 Black draws by 1...♖a4 2 ♖f3+ ♔g4! 3 g7 ♔xf3! 4 g8♕ ♖h4+! 5 ♔g1 ♖g4+!.

b) 1 ♖h7+ ♔g3! 2 g7 ♖g4! 3 ♔f1 ♖f4+! (but not 3...♔f3? 4 ♖h3+ followed by 5 ♖h4 and wins) 4 ♔e2 ♖g4 5 ♔e3 ♔g2 and White cannot make progress.

c) 1 ♖f7! (1 ♖h7+? ♔g3 2 ♖f7 ♖h5+ 3 ♔g1 ♖h8 4 g7 ♖g8 draws) ♖a5 (1...♖g5 2 g7! is diagram 193) 2 ♖f3+! ♔h4 (2...♔g4 3 g7! ♖g5 4 ♖f2 wins; note that 3...♔xf3 is impossible with Black's rook on the fifth rank) 3 g7! ♖g5 4 ♖f4+! wins as in diagram 193.

As always, one should be on the alert for tactical ideas.



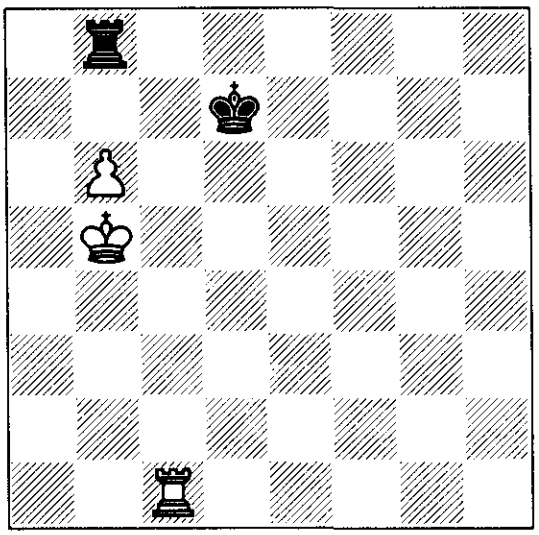
205 +/

*Gunst, 1947*
*Suomen Sosialdemokraatti*

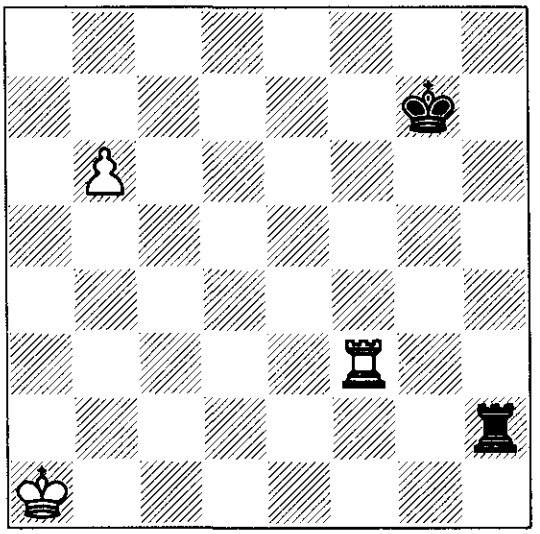
**(205):** 1 ♖a7+! (1 ♖b8 ♔b5! 2 ♖a8 ♔c6 draws) ♔b5 2 ♖a1! ♖xa1 (or 2...♖b4 3 b7 ♔c5 4 ♖a5+!) 3 b7! ♖c1+ 4 ♔d2 ♖c5 5 b8♕+ and White can win Black's rook in another 28 moves.

### 2.2.2: Black's king is cut off along a file

This is not very interesting when the white king is supporting the pawn, because then White wins even if Black's king is cut off by just a single file.



206 +/–



207 +/–

*Chéron, 1944*

**(206):** It doesn't matter who is to play. There is nothing Black can do to prevent White playing ♔a6, meeting ...♖a8+ by ♔b7, when the Lucena position is not far off. If Black's rook is on the other side of the pawn the result is the same; checking from b2 only drives the king in front of the pawn and with a b-pawn this always wins when the pawn is on the sixth rank.

Therefore the most interesting situation is when Black's rook cuts off White's king along a rank, leaving the pawn unsupported by the king.

**(207):** We take Black to move. White threatens to play 2 b7 ♖h8 3 ♖b3 ♖b8 4 ♔a2, so Black's rook has to abandon its active post. After 1...♖h8 (1...♖h6 2 ♖b3!) 2 ♔b2 (renewing the threat of b7) ♖b8 3 ♖b3! ♔f6 4 ♔c3 (4 ♔a3 also wins) ♔e6 5 ♔c4! ♔d7 6 ♔b5! ♖h8 (6...♔c8 7 ♖h3 wins as in diagram 197) 7 ♔a6 ♖a8+ 8 ♔b7 we reach the Lucena position. White wins the same way if his rook is on f4, but with the rook on f1 or f5 Black to play draws.

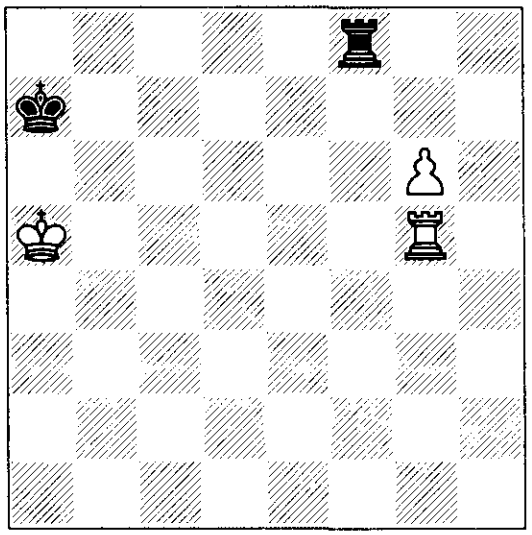
When the rook is on f1 play continues 1...♖h8! (not 1...♖h5? 2 ♖b1!) 2 ♔a2 (2 ♖b1 ♔f7 and Black is in time) ♖a8+! and ...♖b8, when the bad position of White's rook results in loss of the pawn.

With the rook on f5, Black draws by 1...♖h8! 2 ♔b2 ♖b8! 3 ♖b5 ♔f7 4 ♔c3 ♔e7 5 ♔b4 ♔d6 and the badly placed rook means that White cannot do anything, for example 6 ♔a5 is met by ...♖a8+.

## 2.2.3: Other situations

The other positions do not fall into well-defined categories. Situations in which White's rook is behind the pawn are usually not very interesting. As in the next position, the result depends on a race between the two kings.

**(208):** White must not play g7 prematurely, because this gives Black the chance to round up the pawn. The winning line runs 1 ♔b5! ♔b7 2 ♔c5! ♔c7 3 ♔d5! ♔d7 4 ♔e5! ♔e7 5 ♖f5!



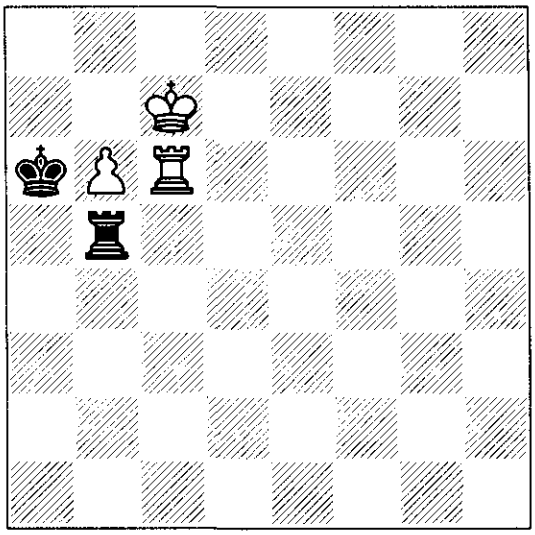
208 +/

*Réti, 1929 (end of study; version)*
*Zadachi i etiudy*

♖a8 (5...♖g8 6 ♖f7+ and 7 ♔f6) 6 ♖f7+ ♔e8 and now White can reach the Lucena position by 7 ♔f6, although 7 ♖h7 is faster.

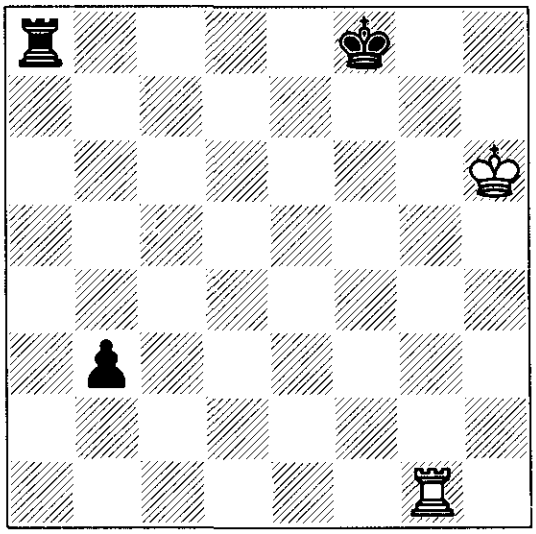
When the white rook defends the pawn from the side much of the analysis with the a-pawn carries over. By now the reader should be familiar with the two characteristic reciprocal zugzwang positions W♔d6, ♖c6, ♙b6 v B♔d4, ♖b7 and W♔f6, ♖e6, ♙b6 v B♔f4, ♖h7, which ultimately derive from diagrams 22 and 25.

(**209**): This is the only new situation with the b-pawn, but it is an important one because it often arises in practice. White to play cannot win because after 1 ♖c1 (1 b7+ ♔a7! or 1 ♖h6 ♖b1) Black has the tactical trick 1...♖c5+! 2 ♖xc5 stalemate. Black to move has nothing better than 1...♖b1 (or any square on the b-file), but this destroys the stalemate and White wins by 2 ♖c2 ♖h1 3 ♖a2+! ♔b5 4 b7 ♖h7+ 5 ♔b8.



209 =/–

The remaining positions feature a miscellaneous collection of tactical ideas.

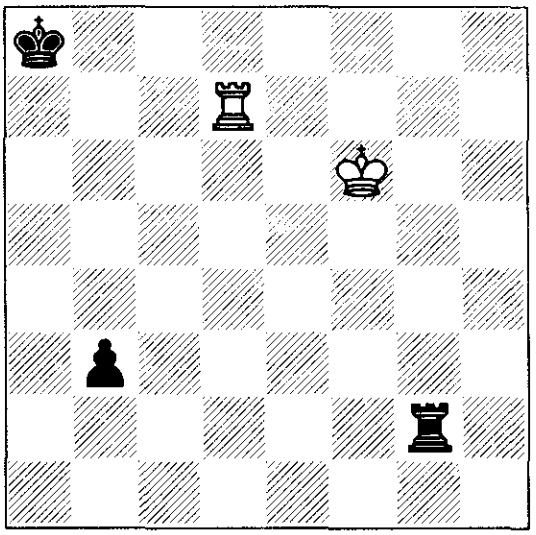


210 =/+

*Gorgiev, 1936*
*'64'*

(**210**): Black to play wins by 1...♖a5 2 ♔g6 ♔e7 and there is nothing to stop his king marching up to support the pawn. White to play draws by 1 ♔g5! (1 ♖e1? ♖e8! 2 ♖b1 ♖b8! 3 ♔g5 ♔e7! 4 ♔f4 ♔d6! 5 ♔e3 ♔c5! 6 ♔d2 ♔b4! 7 ♔c1 ♖h8 wins as in

diagram 197) ♔e7 2 ♔f4! (2 ♖d1? ♖d8 is similar to the last note) ♔d6 3 ♔e3! (3 ♖c1? ♖e8! 4 ♖b1 ♖b8! is the same again) ♔c5 4 ♔d2! ♔b4 5 ♔c1! ♖a1+ (otherwise ♔b1 draws) 6 ♔b2! ♖xg1 stalemate.



211 =/+

*Kasparian, 1953*
*1st HM, All-union Physical Culture and Sport Committee*

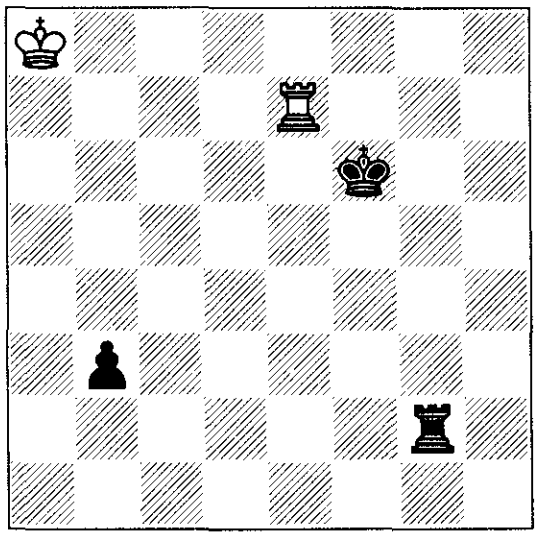
**(211):** Black to play wins by 1...b2 2 ♖d1 ♔b7 3 ♔e5 ♔c6 4 ♔e4 (4 ♔d4 ♖d2+!) ♔c5 5 ♔d3 ♔b4! followed by ...♔b3, so we take White to move:

1) **1 ♔e5?** ♖g4! 2 ♖d2 ♔b7 3 ♔d5 ♔b6 and Black cuts off White's king.

2) **1 ♖d3?** b2! 2 ♖b3 ♖e2! 3 ♔f5 ♔a7! 4 ♔f4 ♔a6! 5 ♔f3 ♖h2! (on any other square White gains a tempo by attacking the rook with his king) 6 ♖b8 ♔a5! 7 ♔e3 ♔a4! 8 ♔d3 ♔a3! 9 ♔c3 ♔a2! and Black reaches the Lucena position.

3) **1 ♖d1?** ♔b7 2 ♔e5 (2 ♖b1 ♖g3! 3 ♔e5 ♔c6 4 ♔d4 ♔b5! and 2 ♔f5 ♔c6 also win) ♖g4! 3 ♔d5 ♔b6! cutting off White's king just as in line 1.

4) **1 ♔f5!** b2 (after 1...♖e2 2 ♔f4! Black has nothing better than 2...b2 transposing to the main line) 2 ♖d1! ♖e2 (2...♔b7 3 ♔e4! ♔c6 again transposes to the main line with the irrelevant difference that Black's rook is on g2 instead of h2) 3 ♔f4! (3 ♔g4? ♖e3! 4 ♔f4 ♖b3! 5 ♖b1 ♔b7 cuts off the white king) ♔b7 4 ♔f3! (4 ♖b1? ♔c6 wins) ♖h2 5 ♔e3 (or ♔e4) ♔c6 6 ♔d3! ♔b5 7 ♔c3! ♔a4 8 ♖d7! (White must meet the threat of ...♔a3-a2, so the choice lies between 8 ♖d7 and 8 ♖d8; however 8 ♖d8? fails against 8...b1♘+! 9 ♔c4 ♖c2+! and 10...♖d2+ winning the rook) b1♘+ (8...b1♕ 9 ♖a7+!) 9 ♔c4! and now the king is close enough to defend the rook, so White draws.



212 =/+

*Nadareishvili, 1979*
*Special Prize, '64'*

**(212):** The alternatives for White are:

1) **1 ♖e1?** b2 2 ♔b7 ♖c2 3 ♖b1 ♔e5! 4 ♔b6 ♔d4 5 ♔b5 ♔c3 and wins.

2) **1 ♖e3?** b2! 2 ♖b3 ♔e5! 3 ♔b7 ♔d4 and Black's king reaches the c4-square.

3) **1 ♖b7?** ♖g8+! 2 ♔a7 ♖g7! wins.

4) **1 ♖e4!** b2 2 ♖b4! ♔e5 3 ♔b7 ♔d5 4 ♔b6! ♖h2 5 ♔b5! ♖h8 6 ♔a6! ♖a8+ 7 ♔b7! ♖a2 8 ♔b6! reaching the reciprocal zugzwang of diagram 188 with Black to move.

There are 12 reciprocal zugzwangs with ♖+♙b6 v ♖. Diagrams 200 and 209 are two, four may be found in and after diagram 202, another four in and after diagram 203 and two after diagram 208.

**Practical tips:** There is relatively little worth learning in this section, since most positions could be calculated over the board by a strong player. However it is worth being aware of the ideas behind diagrams 198-199, and to know the reciprocal zugzwang position in diagram 209.

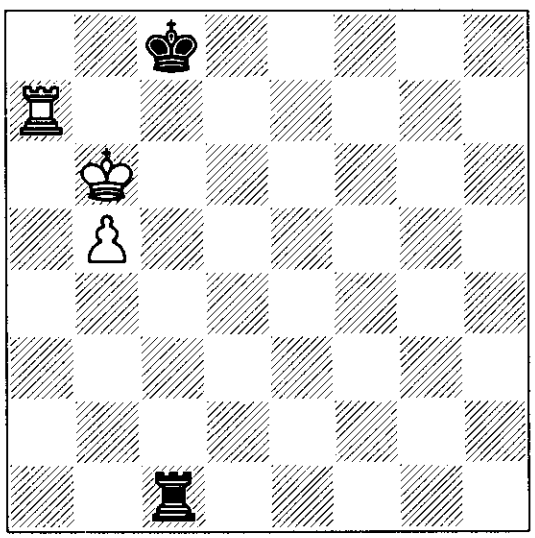
## 2.3: Pawn on the fifth rank

We can distinguish the following cases:

2.3.1: White's king is in front of the pawn 127
2.3.2: Black's king is cut off along a file 128
2.3.3: White's rook defends the pawn from the side 131
2.3.4: Other situations 135

### 2.3.1: White's king is in front of the pawn

This is the first case in which there are interesting positions with Black's king in front of the pawn. As we have already seen, if Black's rook can reach the first rank the result is a draw, so White must have a very favourable position in order to have any winning chances. White can win precisely when Black's only way to avoid mate is to play his king out from in front of the pawn.

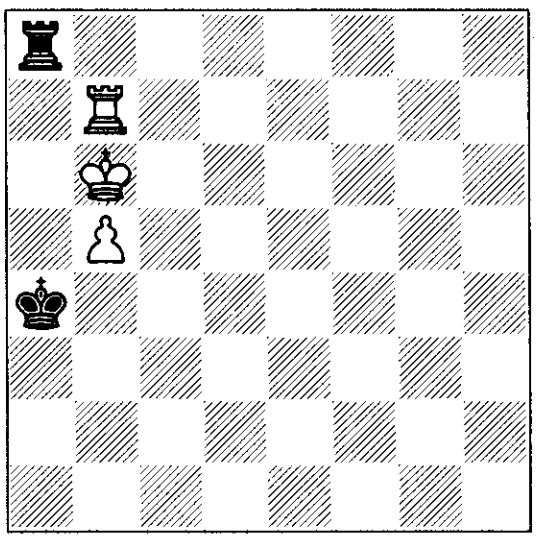


213 /–

**(213):** The main line runs 1...♔b8 (the threat was ♖a8+ expelling the black king) 2 ♖b7+! ♔c8 (2...♔a8 3 ♖c7! wins) 3 ♖h7 ♖b1 (3...♔b8 4 ♖h8+ ♖c8 5 ♖xc8+ and 6 ♔a7 wins,

so Black cannot keep his king in front of the pawn; instead he tries to delay White's plan of ♖h8+, ♔b7 and b6) 4 ♖h8+ ♔d7 5 ♖b8 (an important idea in such endings, preparing ♔a7) ♖b2 (there isn't much Black can do to hold up the advance of the pawn; 5...♖a1 6 ♔b7 and 5...♖c1 6 ♔a7 are similar) 6 ♔a7! ♔c7 (6...♔d6 7 b6 ♖a2+ 8 ♔b7! ♔c5 9 ♖h8 wins) 7 b6+ ♔c6 8 ♖c8+! ♔b5 (8...♔d7 9 b7 wins) 9 b7 ♖a2+ 10 ♔b8 ♔b6 11 ♖c1 (threat ♔c8) ♖h2 12 ♖b1+! ♔c6 13 ♖a1 (threat ♔a8) ♖b2 14 ♔a8 ♖xb7 15 ♖c1+! ♔b6 16 ♖b1+! and Black loses his rook.

If White's king is in front of the pawn but Black's is not, then White normally wins. However, Black can sometimes draw if his king is attacking the pawn directly. The following position is interesting.



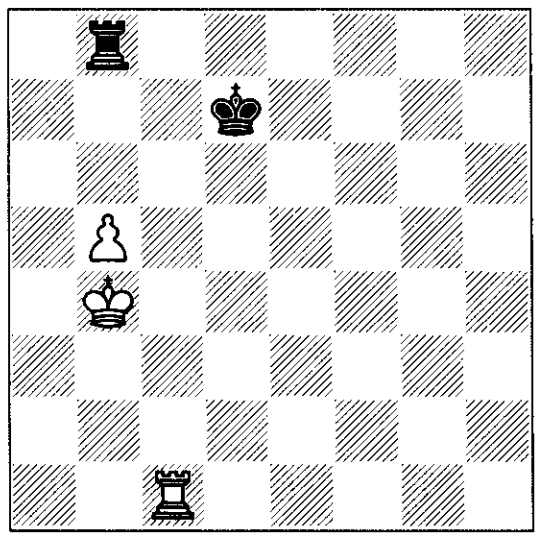
214 =/−

*Original*

**(214):** White to play is unable to free himself and advance the pawn, e.g. 1 ♔c7 (1 ♔c5/c6 ♖c8+ forces 2 ♔b6) ♖h8 2 b6 ♔b5 3 ♖a7 ♖h7+! draws at once. On the other hand, Black to play is unable to maintain his bind: 1...♖h8 (1...♔b4 2 ♖h7 ♖b8+ 3 ♔a6! ♖a8+ 4 ♔b7! ♖g8 5 b6 and 1...♖a5 2 ♔c5 ♔b3 3 ♖h7 ♔a4 4 ♖h4+ ♔b3 5 ♔c6 win easily) 2 ♖a7+! ♔b4 3 ♔a6! followed by b6 and White wins.

### 2.3.2: Black's king is cut off along a file

With an a-pawn, White needed the black king to be cut off by four files in order to win, but with the b-pawn even one file is sufficient for victory with White to move.

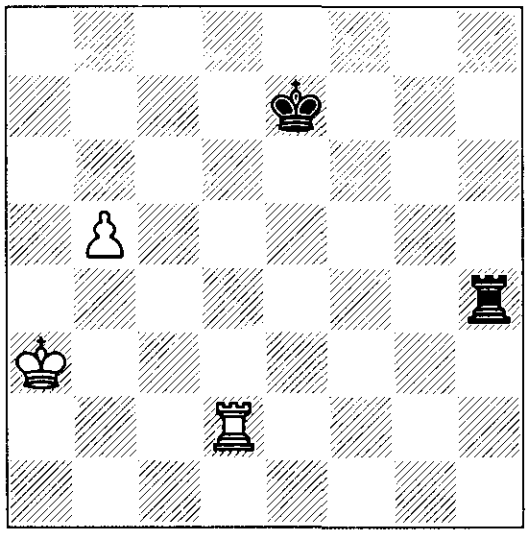


215 +/=

**(215):** Black to play draws by 1...♖c8! and his king moves in front of the pawn. White to play can win by 1 ♔a5 ♖a8+ (1...♖c8 2 ♖xc8 ♔xc8 3 ♔a6) 2 ♔b6! ♖b8+ 3 ♔a6! ♖a8+ 4 ♔b7 and the Lucena position is unavoidable. In fact, Black's pieces are optimally placed in the diagram. If we move Black's king to d6 then he loses the ...♖c8 defence, with the result that

White is able to win whoever is to play.

The situation starts to become complex when White's king is cut off by Black's rook operating on a rank. Once again, Chéron conducted the most detailed analysis.

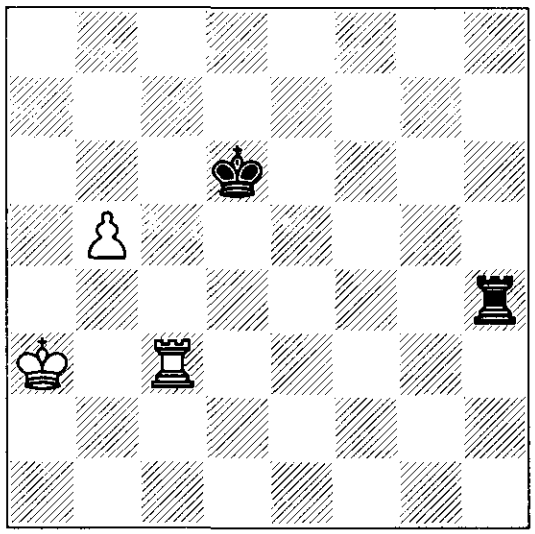


216 +/–

**Simagin – Tarasov**
*USSR 1957*

**(216):** It doesn't matter who is to move because Black to play has nothing better than a waiting move with his rook. In the game, White was to move and the continuation was 1 b6? ♖h6! (1...♖h8 2 ♔b4 wins because after 2...♖d8 White can exchange rooks) 2 ♖b2 (2 b7 ♖a6+ and ...♖b6+) ♖h8? (2...♔d7 3 b7 ♖a6+! 4 ♔b4 ♖b6+ draws) 3 b7 1-0 because White's king can reach a7. However White could have won by 1 ♖d3 ♖g4 (if Black moves his rook along the file, White replies ♔b4, while 1...♔e6 2 b6 ♖g4 3 b7 ♖g8 4 ♖b3 ♖b8 5 ♔a4! is easy) 2 b6 ♖g6 (2...♖g8 3 ♔b4) 3 b7 ♖g8 (now that the rook is on d3 White may meet 3...♖a6+ by 4 ♔b2) 4 ♖b3 ♖b8 5 ♔a4! heading for a7.

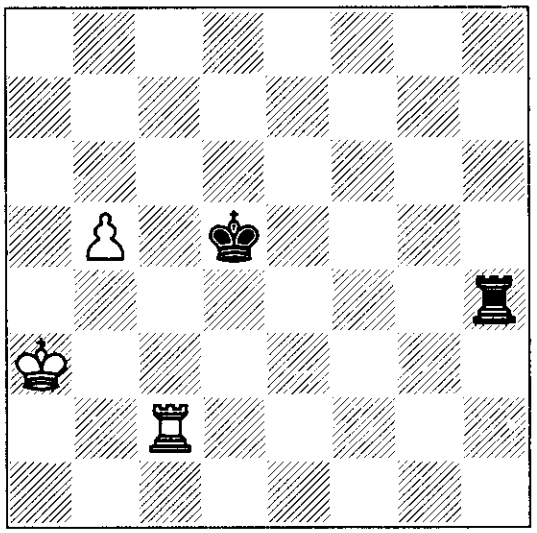
When White's king is cut off on a rank and Black's king is cut off by only one file, the result is in general a draw.



217 =/=

**(217):** We need only take White to play: 1 b6 (1 ♖c8 ♔d7) ♔d7! (the threat was 2 b7 ♖h8 3 ♖c8) 2 ♖c7+ (2 b7 ♖h8! followed by ...♖b8 draws) ♔d8! (2...♔d6? 3 ♖c8 ♖h7 4 ♔b4 wins) 3 ♖c6 ♔d7! and White cannot make progress. The result is the same if Black's king is on d7 or d8, but if we move the king to d5 then White to play wins by 1 b6!. Black has to retreat his rook to meet the threat of 2 b7 ♖h8 3 ♖c8, when White advances his king.

**(218):** Black to play draws by 1...♔d6! as in the previous diagram. With the rook on c2, White to play cannot win by 1 b6? because of 1...♖h6! 2 ♖b2 (2 b7 ♖a6+!) ♖h8! 3 ♔a4 ♔c6! winning the pawn. However, there is an alternative method: 1 ♖c8 ♖g4 (1...♔d6 2 b6! forces the rook away,

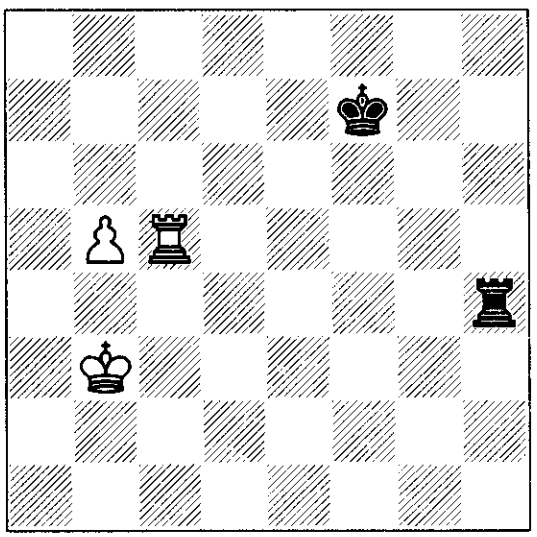


218 +/=

*Chéron, 1944*

when ♔b4 wins) 2 ♔b3 (still not 2 b6? ♖g6!) ♖h4 3 ♔c3 (now that White's king has escaped from the dangerous a- and b-files, there is a threat of b6) ♖h1 4 ♔b4 and the king moves in front of the pawn.

There is an extra finesse in the next position.

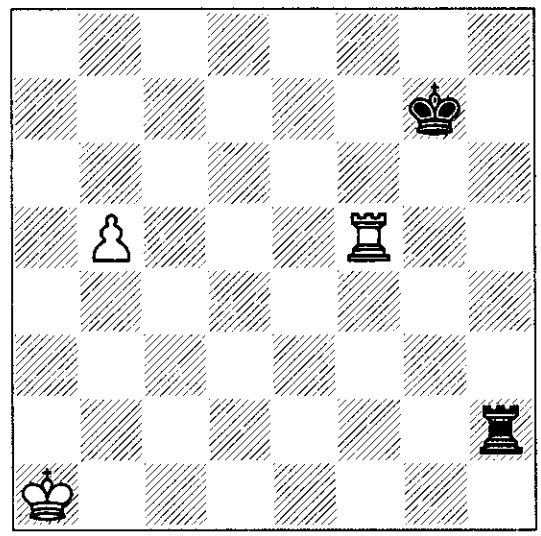


219 +/–

*Original*

**(219):** We take Black to play. The threat is b6, so Black must approach with his king. 1...♔e6 (1...♔e7 2 ♖d5! ♔e6 3 ♖d3 ♔e7 4 ♔a3 threatens 5 b6, thus Black must move his rook from h4, allowing White's king to advance) 2 ♖c7! (2 ♖c8? ♔d7 draws) ♔d5 (or 2...♔d6 3 b6! ♖g4 4 ♖c8! and the king will advance) 3 ♖c8 (3 b6? ♖h6! draws) and wins as in the previous diagram. White must only put his rook on c8 when Black cannot reply ...♔d7, hence the preliminary ♖c7 to drive Black's king off the third rank.

If the white king is cut off further back, then Black's king has to be correspondingly further away for White to win.



220 =/=

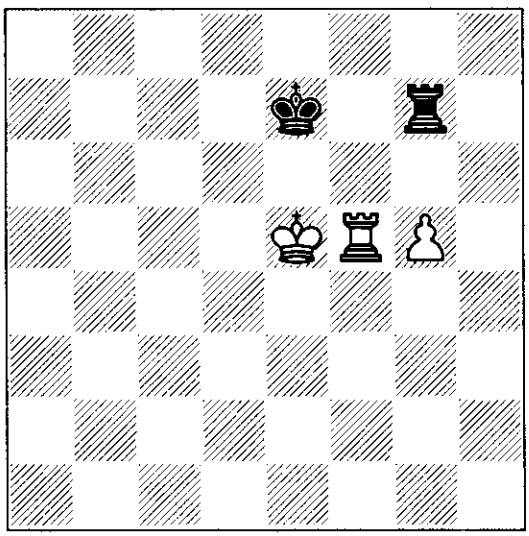
*Chéron, 1944*

**(220):** First we take White to move. After 1 b6 (or 1 ♖f3 ♖h5! 2 ♖b3 ♔f7 3 b6 ♖h8! 4 ♔b2 ♔e7 5 ♔a3 ♔d7 and Black is in time, while for 1 ♔b1 ♔g6 see the play with Black to move) ♖h8! 2 ♔b2 ♖b8! (after 2...♔g6? 3 ♖b5! White gains a vital tempo and wins) 3 ♖b5 ♔f7 4 ♔b3 ♔e7 5 ♔b4 ♔d7 6 ♔a5 ♖a8+ (or 6...♔c6) Black defends.

Black to play must be a little careful, because his rook needs to move freely up and down the file. So 1...♖g2?, for example, loses after 2 b6!. However, 1...♖d2 is safe, and Black can also draw by playing actively with 1...♔g6 2 ♖f8 ♖h5 3 ♖b8 ♔f7 4 b6 ♔e7 5 b7 ♖a5+!, to be followed by ...♖b5+! and ...♔d7.

### 2.3.3: White's rook defends the pawn from the side

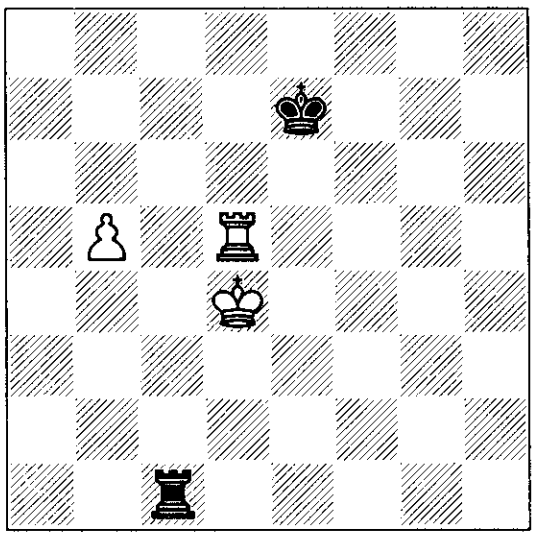
In the first two positions the rook cuts Black's king off along a file, but the white king is not supporting the pawn.



221 +/–

*Réti, 1931*
*Sämtliche Studien*

(**221**): It doesn't make a lot of difference which side is to move. White's plan is ♔f4-g4-h5, winning as in diagram 215. If Black opposes rooks on the f-file then White can usually reply g6. With Black to move, 1...♖g8 (if 1...♖f7, then 2 g6! ♖g7 3 ♖f6! followed by ♔f5-g5 wins) 2 ♔f4! ♖f8 (or else ♔g4-h5) 3 g6! ♖f6 (3...♖xf5+ 4 ♔xf5 ♔e8 5 ♔e6 wins) 4 ♔g5! ♖e6 5 g7 ♖e1 6 ♔g6 reaches the Lucena position. White to play must be slightly more careful. The winning line is 1 ♔f4! ♔e6 (1...♖f7 2 g6! as above) 2 ♖f6+! (not 2 ♔g4? ♖f7! 3 ♖a5 ♖f1 with a draw after 4 ♔h5 ♔f7! 5 ♖a7+ ♔g8! 6 ♔g6 ♖f8! or 4 ♖a7 ♖h1! 5 ♖b7 ♖h2) ♔e7 3 ♔f5! ♖h7 (3...♔e8 4 g6) 4 ♔g6 ♖h1 5 ♔g7 and once again the Lucena position isn't far off.



222 =/–

*Original*

(**222**): It is hard to imagine that such a natural and innocuous position could conceal a reciprocal zugzwang. White to play:

W1) **1 b6** ♔e6! (after 1...♖c8? 2 ♖c5! the line 2...♔d7 3 ♔d5 wins as in the previous diagram, while 2...♖h8 3 ♔c4 ♔d7 4 ♖c7+ followed by ♔b5 is also easy) 2 ♖b5 ♖d1+! 3 ♔c3 (the white king must retreat in order to escape from the checks; 3 ♔e3 is met by 3...♖d8!) ♖c1+! 4 ♔b2 ♖c8! 5 ♔b3 ♔d6 6 ♔b4 ♔c6 draws.

W2) **1 ♖c5** ♖b1! (1...♖h1? 2 ♖c6 ♖h5 3 ♔c4 ♔d7 4 ♔b4! ♖h8 5 ♔a5 wins) 2 ♔c4 (threat ♖d5) ♔d7! (not 2...♔d6? 3 ♖c6+! followed by ♔c5 and wins) 3 ♖c6 ♖c1+! and Black can exchange rooks.

It is more surprising that Black to play cannot maintain the status quo:

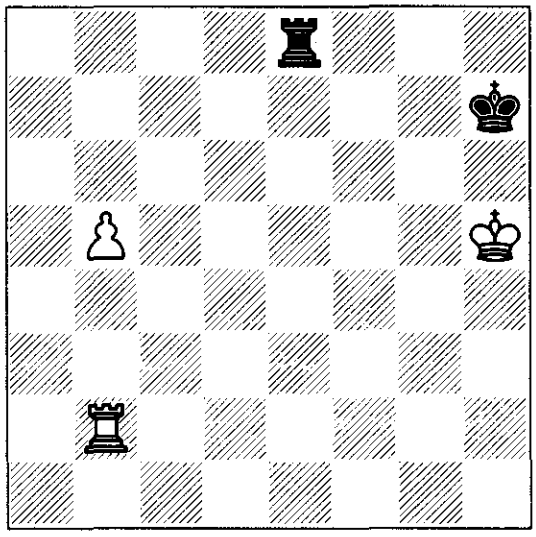
B1) **1...♔e6** 2 ♖c5! ♖d1+ (after 2...♖b1 White can win by 3 ♖c6+ and 4 ♔c5) 3 ♔c4! ♔d7 4 ♔b4! (threat ♔a5) ♖a1 5 b6 wins.

B2) **1...♔e8** (1...♔f6 2 ♖c5) 2 b6 ♖c8 3 ♖c5 winning as in line W1 after 1...♖c8?.

B3) **1...♖c2** 2 b6! ♔e6 (2...♖c8 3 ♖c5 is W1 again) 3 ♖b5! ♖d2+ 4 ♔c3 (White gains a vital tempo over line W1 because his king does not have to retreat so far) ♖d8 5 b7 ♖b8 6 ♔b4! ♔d6 7 ♔a5! and White is just in time.

B4) **1...♖c8** (1...♖b1 2 ♔c5) 2 b6! ♔e6 3 ♖c5! followed by ♔c4-b5 and wins.

It is quite easy to transform this position into the tricky endgame study W♔d1, ♖f8 v B♔e6, ♖e4, ♙g4. White to play and draw. Solution 1 ♔c2!! (not 1 ♔d2? ♔e5!) ♔e5 2 ♔d2 and then as above. The following position is also deceptive.



223 +/=

*Original*

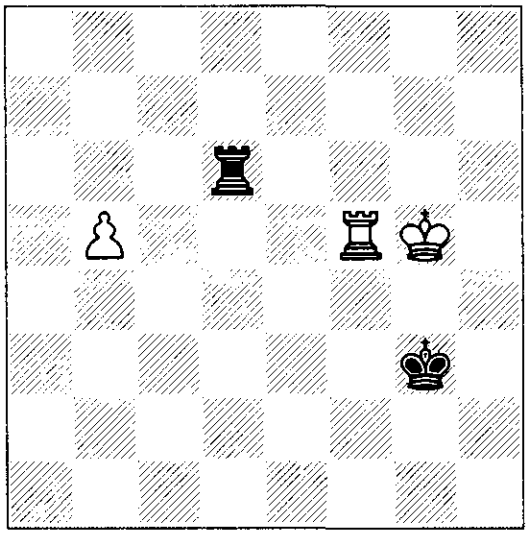
(**223**): Black to play draws with 1...♔g7 2 ♔g5 ♔f7 3 ♔f5 ♖b8 and White cannot prevent Black moving his king in front of the pawn. With White to play, the position looks easy to analyse because White's rook is already optimally placed behind the pawn. But in fact the position is much more complex than it appears and in the main line White must use his rook to cut off Black's king. The win is 1 ♔g5! (1 b6? ♔g7 2 ♔g5 ♔f7 3 ♔f5 ♖b8 4 ♔e5 ♔e7! 5 ♔d5 ♔d7! 6 ♔c5 ♖h8 followed by ...♔c8 draws) ♔g7 2 ♔f5! ♔f7 3 ♖c2! (3 ♖d2? ♖e1 4 b6 ♖b1 5 ♖d7+ ♔e8 6 ♖b7 ♔d8! draws) and now:

1) **3...♖e1** 4 b6! ♔e7 (with the rook on c2, 4...♖b1 loses to 5 ♖c7+ followed by 6 b7) 5 ♖b2! (a surprising switchback by White's rook) ♖f1+ 6 ♔e5! ♖f8 7 ♖c2! (not 7 ♔d5? ♔d7! drawing) ♖b8 (after 7...♖h8 8 ♖c7+ ♔d8 9 ♔d5 the king heads for b7) 8 ♖c6 ♔d7 (8...♖h8 is the last bracket) 9 ♔d5 ♖h8 10 ♖c7+ and 11 ♔c6 wins.

2) **3...♖b8** 4 ♖c5! (White must not lose time; 4 ♖c7+? ♔e8! 5 ♖c5 ♔d7 6 ♔e5 ♖c8 draws) ♔e7 (or 4...♖b6 5 ♔e5) 5 ♔e5 ♔d7 (5...♖b6 6 ♔d5 ♖h6 7 ♖c6 ♖h5+ 8 ♔c4! ♔d7 9 ♔b4! wins) 6 ♔d5! and after 6...♖b7 7 ♔c4! or 6...♖b6 7 ♔c4! we transpose to diagram 221.

In the following positions, Black's king is in the other half of the board.

The next three diagrams are closely linked and should be studied together.



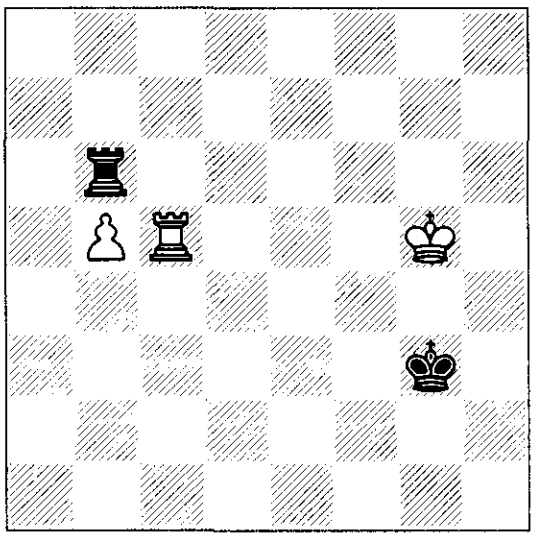
224 =/–

*Original*

**(224):** With Black to move the analysis runs 1...♖e6 (1...♖b6 2 ♖c5! is the next diagram) 2 ♖d5! (after 2 ♖c5 ♖b6 we have the next diagram with White to play; as we shall see, White's only winning try is 3 ♖f5, but in this case 3...♖d6! repeats the position) ♔f3 (or 2...♖b6 3 ♖c5) 3 ♔f5! ♖b6 (3...♖h6 4 ♖d3+! ♔e2 5 ♖b3! ♖b6 6 ♔e5 ♔d2 7 ♔d4 ♔c2 8 ♖b4 wins easily) 4 ♖c5 reaching the analysis of the next diagram with Black to move.

With White to play, 1 ♖e5 (1 ♖c5 ♖b6 is the next diagram with White to play) ♔f3! 2 ♔f5 ♖h6! 3 ♖d5 ♔e3! 4 ♔e5 ♖g6! leads to a draw.

**(225):** Readers will already be familiar with the reciprocal zugzwang position W♔c7, ♖b7, ♙a7 v B♔c5, ♖a8 (we saw this in diagram 22). This pattern was repeated in many subsequent sections because, within limits, the zugzwang is maintained when the



225 =/–

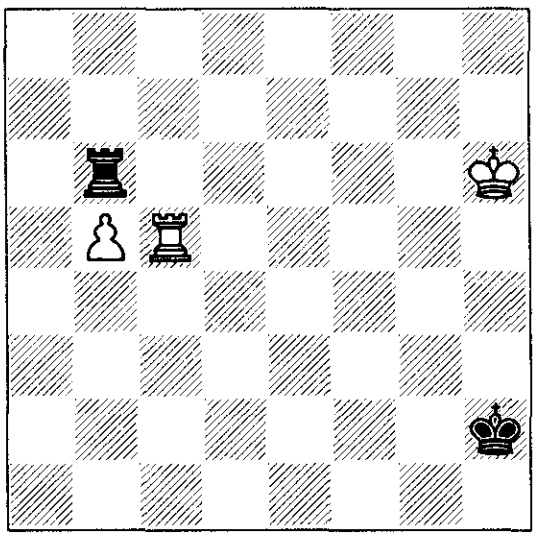
*Original*

position is shifted. The pawn may be on a6, b7, b6 or b5 and the position remains reciprocal zugzwang. The unusual feature with the pawn on b5 is that this familiar position becomes one of a family of linked zugzwang positions derived by moving the kings to the right. The kings may be on the d-, e-, f- or g-files (but not the h-file, because then White wins with or without the move – see diagram 226). This did not happen with the pawn on b6 because then White can win the king-shifted positions whoever is to move. For example, with W♔g6, ♖c6, ♙b6 v B♔g4, ♖b7 White wins by 1 ♖c4+ ♔f3 2 ♖b4! ♔e3 3 ♔f5 and White's king reaches c6.

If we take Black to move in diagram 225, White can win by 1...♔f3 (1...♖d6 2 ♔f5) 2 ♔f5! ♔e3 (2...♖h6 3 ♔e5) 3 ♔e5! ♔d3 4 ♔d5! ♖h6 (4...♔e3 5 ♔c4 ♖h6 6 ♔b4 followed by ♔a5 and b6) 5 ♖c1! (not 5 ♖c8? ♖h5+ 6 ♔c6 ♔c4! 7 b6 ♖h6+! 8 ♔c7 ♔b5! 9 b7 ♖h7+! 10 ♔b8 ♔b6! and

Black wins the pawn) ♔d2 (otherwise ♔c5) 6 ♖c7 ♔d3 7 ♖e7 ♔c3 8 ♔c5 ♖h5+ 9 ♔c6 ♖h6+ 10 ♔c7 and the pawn runs through.

When White is to move, the main line is 1 ♔f5 (1 ♖d5 and 1 ♖e5 are both met by 1...♔f3!, while 1 ♖f5 ♖d6! is the previous diagram) ♔f3! 2 ♖d5 (2 ♔e5 ♔e3 3 ♖d5 and 2 ♖e5 ♖h6 3 ♖d5 ♔e3! 4 ♔e5 ♖g6! transpose to the main line) ♔e3! (2...♖h6? 3 ♖d3+! ♔e2 4 ♖b3!) 3 ♔e5 ♖g6 4 ♖c5 ♖b6 5 ♔d5 ♔d3! with a draw.



226 +/

*Mandler, 1954*
*Prace*

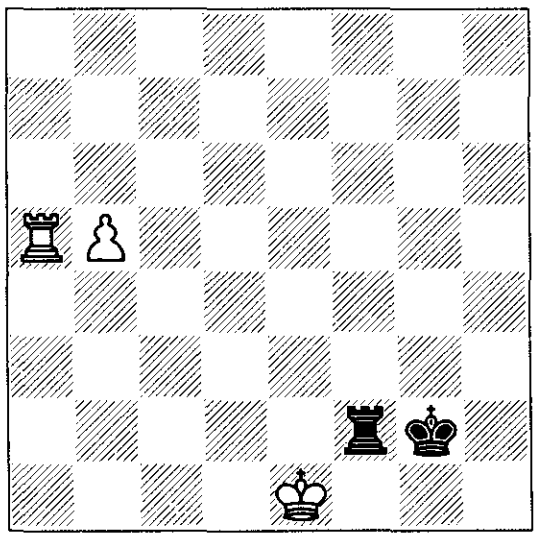
**(226):** We can use the analysis of the previous two diagrams to solve Mandler's study. 1 ♔h5! (not 1 ♔g7? ♔g3 and Black wins the pawn, nor 1 ♔g5? ♔g3! and we have diagram 225 with White to play) ♔h3 (1...♔g3 2 ♔g5! is diagram 225) and now:

1) **2 ♖e5?** ♔g3! 3 ♖f5 (3 ♔g5 ♔f3! 4 ♔f5 ♖h6) ♖e6! (not 3...♖d6? 4 ♔g5! with diagram 224) 4 ♔g5 ♖d6! is diagram 224 with White to play.

2) **2 ♖f5?** ♔g3 3 ♔g5 ♖d6! as in line 1.

3) **2 ♖g5!** (we mentioned above that shifting the kings to the h-file makes the position a win even with White to play; this move is the reason why) ♖d6 (the other lines are 2...♖f6 3 ♖e5 ♔g3 4 ♔g5! ♖b6 5 ♖c5 and 2...♖e6 3 ♖d5! ♔g3 4 ♔g5! ♔f3 5 ♔f5! ♖b6 6 ♖c5!, with diagram 225 in both cases) 3 ♖f5! (not 3 ♖e5? ♔g3! 4 ♔g5 ♔f3! 5 ♔f5 ♖h6! drawing as in diagram 224 with White to play) ♔g3 (3...♖b6 4 ♔g5 ♔g3 5 ♖c5!) 4 ♔g5! transposing to diagram 224.

With the b-pawn it is also possible for the white rook to defend the pawn from a5. So far this situation does not seem to have been investigated, so we look at one interesting position.



227 =/–

*Original*

**(227):** With White to play:

W1) **1 ♖a8** (1 ♖a4 ♖b2!) ♖b2! 2 ♖b8 ♔f3! 3 b6 ♔e3! 4 ♔d1 ♖d2+! (not 4...♔d3? 5 ♔c1! ♖c2+ 6 ♔b1! ♖c6 7 b7! ♖d6 8 ♔b2 ♔d4 and now

not 9 ♔b3? ♔d5! followed by ...♔c6 drawing, but 9 ♔a3! threatening 10 ♖a8, when 9...♖d7 10 ♔b4 ♖d6 11 ♔b5 wins) 5 ♔c1 ♖d7! (Black must check on the d-file because c7 is not available after a check on the c-file) 6 ♔b2 (6 d7 ♔d4 wins the pawn) ♔d4 7 ♔b3 ♔c5 8 ♔a4 ♔c6 9 ♔a5 ♖d1 draws.

W2) **1 b6** ♖b2! 2 ♖a6 ♔f3 3 ♔d1 ♔e4 wins the pawn.

W3) **1 ♔d1** ♔f3! (1...♔g3? 2 ♔c1! wins after 2...♔f4 3 b6! or 2...♖f5 3 ♔b2) 2 ♔c1 ♔e4! (not 2...♔e3? 3 b6! ♖f8 4 ♖a4! ♔d3 5 ♔b2! followed by ♖b4 and b7) 3 b6 ♖f8! 4 ♔c2 ♔d4! 5 ♔b3 ♖f1! and White has no reasonable move since 6 ♖b5 ♖b1+! is perpetual check.

Black to play cannot move his king to the third rank, and alternatives improve White's chances in one or other of the above lines:

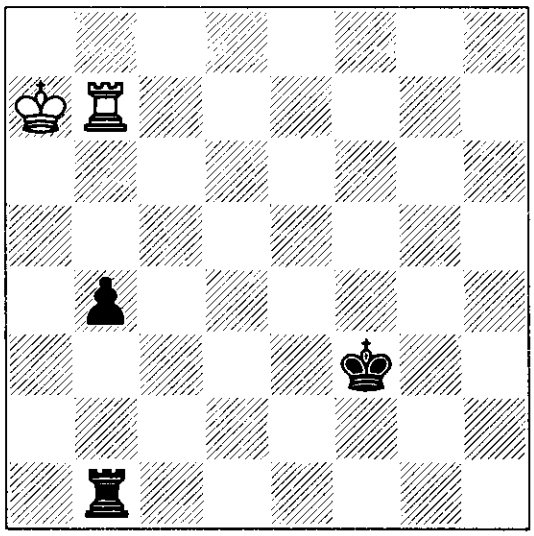
B1) **1...♔g1** (1...♔f3/g3 2 ♖a3+! ♔g2 3 ♖b3 is simple) 2 ♖a8 (2 ♔d1 is also good) ♖b2 3 ♖b8 followed by b6 and Black is too slow to set up the defence of line W1.

B2) **1...♖b2** (1...♖f4 2 ♖a2+ ♔g3 3 ♖b2 ♖f8 4 b6 ♖b8 5 ♖b5 ♔f4 6 ♔d2 ♔e4 7 ♔c3 and 1...♖f8 2 b6 ♔f3 3 ♔d2! ♔e4 4 ♔c3! are easy wins) 2 ♔d1! ♔f3 3 ♔c1! ♖b4 4 ♔c2 ♔e4 5 ♔c3! ♖b1 6 ♔c4! ♖c1+ 7 ♔b4! (7 ♔b3? ♔d5! draws) ♔d5 8 ♖a7 ♔d6 9 b6 ♖b1+ 10 ♔a5! ♖a1+ 11 ♔b5! and the king gets in front of the pawn with an eventual Lucena position.

It is worth noting that if all the kingside pieces are moved up a rank (W♔e2, ♖a5, ♙b5 v B♔g3, ♖f3) then the reciprocal zugzwang still holds, with virtually identical variations.

## 2.3.4: Other situations

First we examine two positions with the rook in front of the pawn.



228 =/+

*Isenegger, 1954*
*National Zeitung (Basel)*

**(228):** Black to play wins by 1...b3 2 ♖b5 ♔e3 3 ♔b6 ♔d3 and Black's king is in time to support the pawn. White to play can draw, but this is another of those rare cases in which Chéron's analysis is incorrect. Chéron considered White's drawing method to be unique, but White actually has three ways to save the game. Here are the various drawing methods:

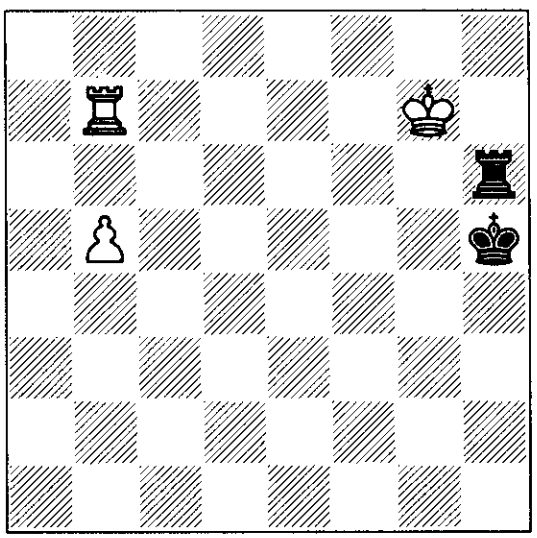
1) **1 ♔a6** b3 2 ♖b5! (at the moment White's king cannot approach, as 2 ♔a5? ♖a1+! and 2 ♔b5? b2! win, so the white rook must move closer to the enemy pawn to allow White's king to slip behind) ♔e3 3 ♔a5! ♔d3 (after 3...♖a1+ 4 ♔b6! Black's rook must

return to b1) 4 ♔b4! ♔c2 5 ♖h5 drawing.

2) **1 ♖h7** (attacking the pawn from the side is the simplest draw) b3 (1...♔e3 2 ♔b6 is similar) 2 ♔b6 ♔e3 (2...b2 3 ♖h2) 3 ♔b5 ♖f1 (3...♔d3 4 ♔b4 is an immediate draw) 4 ♖h3+ ♖f3 5 ♖h2! ♔d3 6 ♔b4 and wins the pawn.

3) **1 ♔b6** (Isenegger's intended solution) b3 (1...♔e4 2 ♔b5 draws) 2 ♔c5 (2 ♖h7 draws as in line 2, but not 2 ♔b5? b2 and wins) b2 (the rest of the study is correct) 3 ♖b3+! ♔e2 4 ♔b6! (not 4 ♔b4? ♔d2! nor 4 ♔b5? ♔d1! 5 ♖b4 ♔d2 6 ♖d4+ ♔e3 7 ♖b4 ♔d3 and in both cases White ends up in zugzwang – these ideas are familiar from the analysis of diagram 11) ♔d2 5 ♖b5! and now the rook is far enough away from Black's king to draw.

The following position is related to diagram 200.

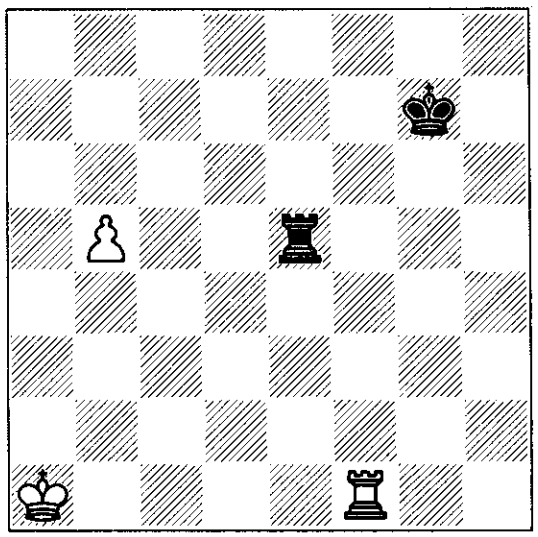


229 =/–

*Original*

**(229):** With White to play, 1 ♖c7 (1 b6 ♔g5! is diagram 200 and 1 ♔g8 ♔g5 2 b6 ♔f5 transposes into the analysis of diagram 200) ♖b6! 2 ♖c5+ ♔g4! 3 ♔f7 ♔f4 loses the pawn, while 1 ♖b8 ♔g5! 2 ♔f7 ♔f5 3 ♔e7 ♔e5 4 ♔d7 ♔d5 is no better.

The position is slightly more interesting with Black to move: 1...♖g6+ (1...♔g5 2 b6! is diagram 200 and 1...♖d6 2 ♔f7 ♔g5 3 ♔e7 ♖d5 4 b6 wins) 2 ♔f8! (this prevents ...♔g5 due to the reply ♖g7 and thereby stops Black's king moving to the queenside; 2 ♔f7? ♔g5! 3 ♔e8 ♔f5! 4 ♔d8 ♔e5! 5 ♔c7 ♔d5 only leads to a draw) ♖h6 3 ♖d7 ♖b6 4 ♖d5+! ♔g4 5 ♔e7 and White's king arrives first.



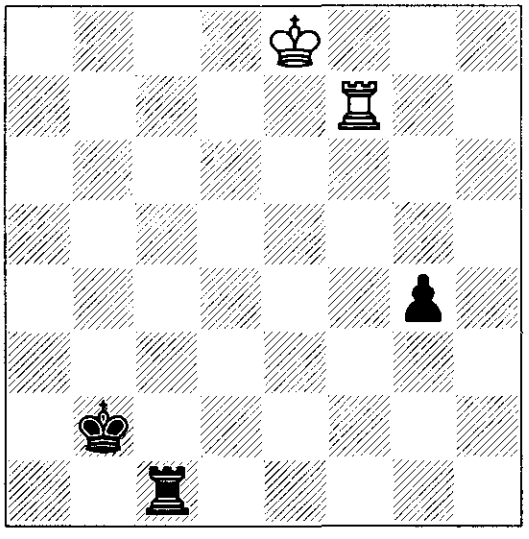
230 +/

*Chéron, 1923*

**(230):** If Black's rook were on c5, d5, g5 or h5 the result would be a draw. First of all we will see why Black loses with the rook on e5. White plays 1 ♖b1! ♔f7 (1...♖e8 2 ♔a2 wins) 2 b6! (White cannot wait; after 2 ♔a2 ♔e7 White can no longer play 3 b6 because of ...♖a5+ and ...♖b5+) ♖e8 (2...♖a5+ 3 ♔b2! ♖b5+ 4 ♔c2 wins) 3

♔a2 (3 ♔b2 is just as good) ♖b8 (the unfortunate position of Black's rook means that the king cannot move to the e-file) 4 ♔a3! ♔e7 5 ♔a4! ♔d7 6 ♔b5! (6 ♔a5? ♖a8+! 7 ♔b5 ♔c8! draws – see diagram 197) ♔c8 (6...♖h8 7 ♔a6 wins) 7 ♖h1 and wins as in diagram 197.

Now move the rook to d5. Black draws by 1 ♖b1 ♔f7 2 b6 ♖d8! 3 ♔a2 ♔e7 4 ♔a3 ♔d7 5 ♖d1+ ♔e7 (not 5...♔c8? 6 b7+!) because he can allow the exchange of rooks on the d-file and still catch the pawn. Play is similar with the rook on c5. When the rook is on g5 or h5 the problem of White exchanging rooks doesn't arise and the black king can march directly to the queenside.



231 –/+

*Rinck, 1908*
*Deutsche Schachzeitung*

(**231**): Rinck originally published this as a White to play and draw study, but Grigoriev later proved that it is a win for Black. The analysis runs:

1) **1 ♖f5** and now:

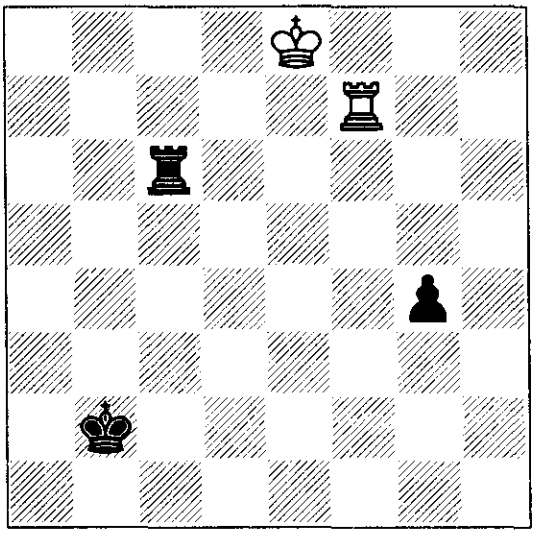
1a) **1...g3?** 2 ♖g5! ♖c3 (2...♖g1 3 ♔f7! ♔c2 4 ♔g6! ♔d2 5 ♔f5 draws) 3 ♔f7! ♔c2 4 ♔g6! ♔d2 5 ♔h5! ♔e2 6 ♔h4! ♔f2 7 ♔h3! ♖f3 8 ♖g4! reaching the reciprocal zugzwang of diagram 209. This variation was Rinck's intention.

1b) **1...♔c2** 2 ♖g5 ♖g1! 3 ♔f7 ♔d3 4 ♖e5 (4 ♔g6 ♔e4 5 ♔h5 ♔f4! 6 ♖a5 ♖h1+! 7 ♔g6 g3 wins, so White must waste time with his rook) g3 5 ♔g6 ♖f1 (not 5...g2? 6 ♖g5 with a draw) 6 ♖g5 ♖f3! 7 ♔h5 ♔e3 8 ♔h4 ♔f2! 9 ♔h3 and, in contrast to line 1a, Black's extra tempo means that the white rook stands on g5 instead of g4, so Black wins by 9...♖f8.

2) **1 ♖f4** (trying to save time by putting the rook on the fourth rank immediately, but this allows Black to turn the tables in a curious way) g3! (now this line works precisely because White has an extra tempo!) 2 ♖g4 ♖c3 3 ♔f7 ♔c2 4 ♔g6 ♔d2 5 ♔h5 ♔e2 6 ♔h4 ♔f2! 7 ♔h3 ♖f3! and the reciprocal zugzwang is reached with White to move.

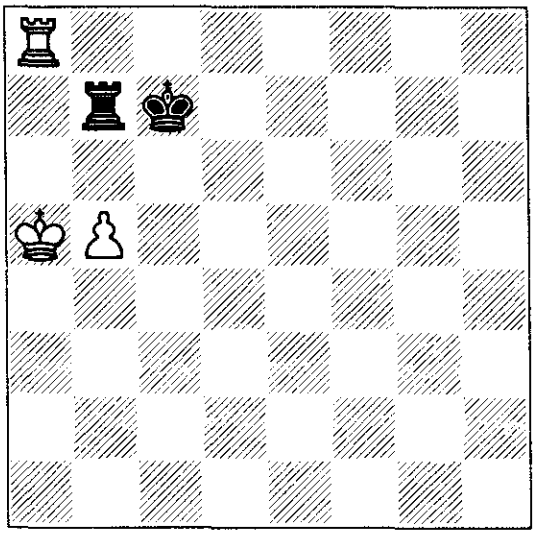
3) **1 ♖g7** ♖c4! 2 ♔d7 (the only way to cross the seventh rank without wasting time; 2 ♖g5 loses after 2...♖f4! 3 ♔e7 ♔c2 4 ♔e6 ♔d2 5 ♔e5 ♔e3! 6 ♖g8 ♔f3) ♖e4! 3 ♔d6 ♔c3 4 ♔d5 ♔d3! 5 ♖a7 ♔e3 6 ♖a3+ ♔f4! with an easy win.

(**232**): Grigoriev himself was able to rescue Rinck's idea. White draws by 1 ♖f5! (1 ♖f4? g3! 2 ♖g4 ♖c3! and 1 ♖g7? ♖c4! are respectively lines 2 and 3 of the previous diagram) g3 (the position after 1...♔c3 2 ♖g5 ♖c4 3 ♔f7! ♔d3 4 ♔g6! ♔e3 5 ♔h5! ♔f3 6



232 =/+

*Grigoriev, 1937*
*'64'*



233 =/–

*Original*

♔h4 ♖f4 is diagram 209 shifted up a rank, but this is a draw whoever is to move; here 7 ♖a5 is adequate) 2 ♖g5! ♖c3 3 ♔f7! drawing as in line 1a of the previous diagram.

(**233**): This section ends with a final reciprocal zugzwang. It is so simple that analysis is not required.

There are 11 reciprocal zugzwangs with ♖+♙b5 v ♖. These may be found as diagrams 214, 222, 223, 225 (with three more in the notes), 227 (plus one in the notes), 229 and 233.

**Practical tips:** The basic positions are diagrams 213 and 215, which should be familiar to all over-the-board players. It is also worth noting the ideas contained in diagrams 222 and 228, as these could easily arise during a game.

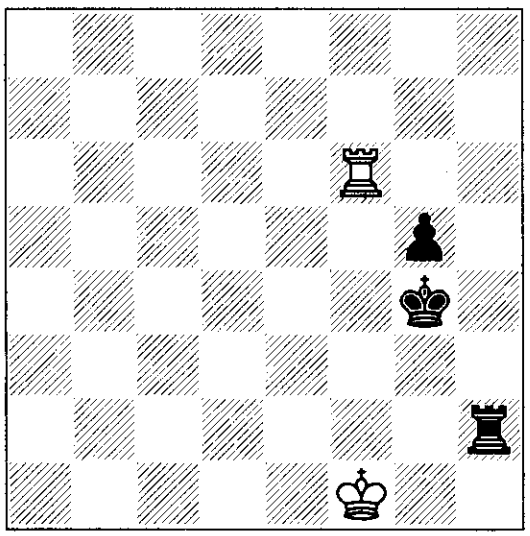
## 2.4: Pawn on the fourth rank

As the pawn moves further back the emphasis changes. White can only win if Black's king is far away from the pawn, or if the king is cut off by White's rook. The most important factor is whether the king is cut off along a file or a rank. In contrast to section 2.3, the situation with the king cut off along a file is very complex and requires detailed analysis. It is harder to classify the other cases, because positions of one type can easily change into those of another type, but I have made a rough division.

2.4.1: White's king is in front of the pawn 139
2.4.2: Black's king is cut off along a file 141
2.4.3: Black's king is cut off along a rank 151
2.4.4: Other situations 153

### 2.4.1: White's king is in front of the pawn

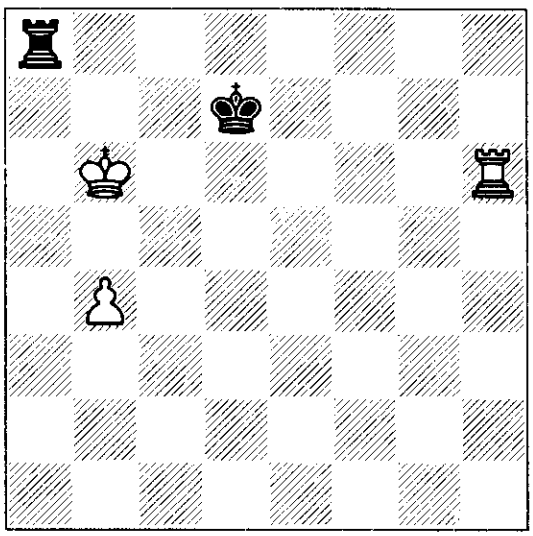
If Black's king occupies a square in front of the pawn then White can only win in very unusual circumstances. Just as with the pawn on the fifth, White needs to be able to drive Black's king out from in front of the pawn. This can only be achieved by mating threats.



234 =/+

**(234):** This position could have arisen (with Black to play) in Luchinkin-Vaisman, USSR 1979. The win is by 1...♔g3! 2 ♔g1 (otherwise Black plays ...♖h1+ and ...g4, winning as in diagram 213) ♖g2+! 3 ♔f1 (3 ♔h1 ♖f2!) ♖a2 and now 4 ♔g1 ♖a1+ wins by exchanging rooks, while otherwise Black plays ...♖a1+ and ...g4, again leading to diagram 213. White to play can draw in many ways; perhaps the simplest is 1 ♔g1 followed by 2 ♖f1, because with a b- or g-pawn the position is drawn even when the defender's rook is confined to the first rank.

The following position is far more complex, but eventually reduces to the same idea.



235 +/–

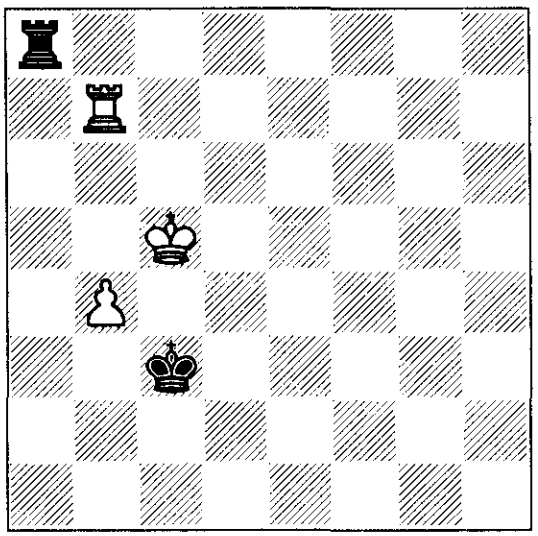
*Original*

**(235):** We assume Black is to play. 1...♖b8+ (the threat was b5) 2 ♔c5! (2 ♔a5 ♔c7! 3 ♖h7+ ♔c6! draws) ♖c8+ (2...♖g8 3 ♖c6 followed by b5 wins, while 2...♔c7 3 ♖h7+ loses at once) 3 ♔b5! ♖b8+ (after 3...♖g8 4 ♖c6 White threatens ♔c5, so Black has nothing better than 4...♖b8+ 5 ♖b6 transposing to the main line) 4 ♖b6! ♖h8 (or 4...♖a8 5 ♖b7+ ♔c8 6 ♖h7 ♖a1 7 ♔b6 winning just as in diagram 234) 5 ♔a6 ♔c7 6 ♖b7+! ♔c8 7 b5 ♖h1 8 ♖g7 ♖a1+ 9 ♔b6 ♖b1 10 ♖g8+ and wins as in diagram 213.

If Black's king cannot move in front of the pawn, then having the white king in front usually offers good winning chances.

One obvious exception is if Black can immediately give a barrage of checks driving the king away. A second possibility is that Black's king is

directly attacking the pawn and White cannot free himself.



236 +/=

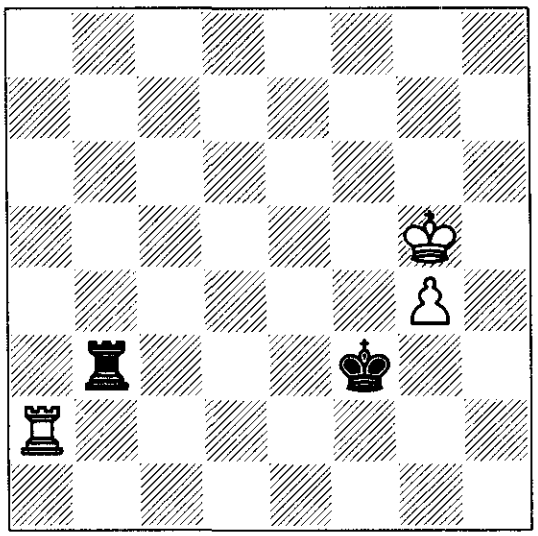
*Grigoriev, 1937*

(**236**): White to play wins by 1 b5! ♖c8+ 2 ♔b6! (2 ♔d6? ♔b4 3 b6 ♔b5 draws) ♔c4 3 ♖h7 ♖b8+ 4 ♔c6 ♖c8+ 5 ♔b7 ♖c5 6 b6 (or 6 ♔a6) and the pawn will advance. Black to play draws by 1...♖c8+! (1...♖h8? 2 b5!) 2 ♔b5 ♔b3 (moving the rook along the eighth rank is also good) 3 ♖b6 (3 ♔a6 ♖a8+! and 3 ♖h7 ♖b8+! 4 ♔a5 ♖a8+! draw) ♖a8 4 ♔c6 ♔c4 5 b5 ♖c8+ 6 ♔b7 ♖h8 7 ♔a7 ♔c5 8 ♖b7 ♖h1 9 b6 ♖a1+ 10 ♔b8 ♖h1 and White cannot make progress.

(**237**): In this position White can free himself and advance the pawn. We need only take Black to move:

1) **1...♖b5+** (1...♖b4 2 ♔h5 ♔f4 3 g5 ♔f5 4 ♖f2+ wins easily) 2 ♔h4! ♖b8 (2...♖b4 3 ♔h5) 3 ♖a5 ♖h8+ 4 ♖h5! ♖g8 5 ♖f5+! ♔e4 6 ♔g3 and we have transposed to diagram 259.

2) **1...♖b8** 2 ♖a3+! ♔e4 3 ♔h6 (White should not give another check

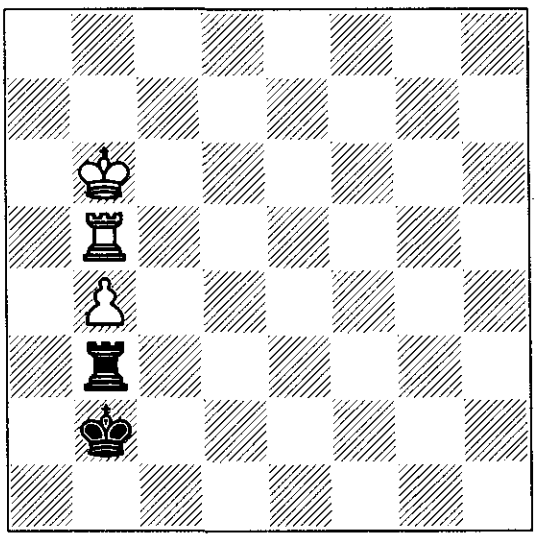


237 +/–

*Rabinovich, 1938*
*Endspil*

because 3 ♖a4+ ♔f3 4 ♔h6? ♖h8+! 5 ♔g7 ♖h4! draws) ♖b6+ (or 3...♔f4 4 g5 winning) 4 ♔h5 ♖b8 5 g5 wins.

The following position has a striking visual appearance.



238 =/–

*Original*

(**238**): The case of White to move is quite simple, because the lines 1 ♔c5 ♖c3+! 2 ♔d6 (or any other square on the d-file) ♔b3, 1 ♔c6 ♔a3! 2 ♔c5

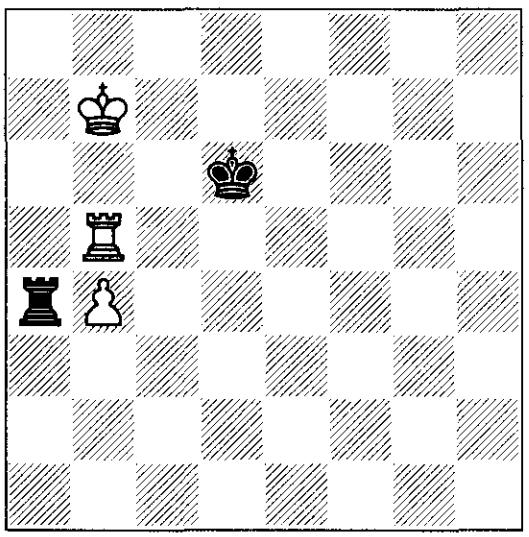
♖c3+ 3 ♔b6 ♔a4 and 1 ♔a6 ♔c3! 2 ♔a5 ♖a3+! 3 ♔b6 ♔c4 offer White no winning chances at all. It becomes clear that the diagram involves a kind of opposition. If the kings move to opposite sides of the pawn then Black has a rook check which forces White's king back. So it should come as no surprise that with Black to play, White moves his king to the same side of the pawn, for example:

1) **1...♔c3** 2 ♔c5! ♖b1 3 ♖b8 ♖h1 4 b5! ♖h5+ 5 ♔b6! (not 5 ♔c6? ♔c4! 6 b6 ♖h6+! 7 ♔b7 ♔b5! 8 ♔a7 ♔a5! and Black draws) ♔b4 6 ♔a6! ♖h1 7 b6 ♔c5 8 ♖c8+ winning.

2) **1...♔a3** 2 ♔a5! ♖b1 3 ♖b7 ♔b3 4 b5 ♖a1+ 5 ♔b6 ♔b4 6 ♖h7 and wins.

3) **1...♔c2** 2 ♖c5+ followed by b5, or 1...♔a2 2 ♖a5+ followed by b5.

With the pawn as far back as b4, there are even some drawing positions in which Black ties White down by attacking the pawn with his rook.



239 =/–

*Original*

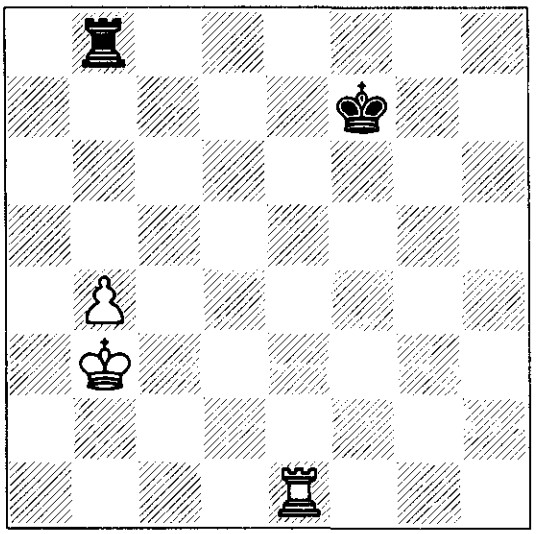
**(239):** Once again, with White to play there isn't much to analyse. The only line is 1 ♔b6 (1 ♖b6+ ♔d5! 2 b5 ♔c5 followed by ...♖a5 wins the white pawn) ♖a8! (1...♔d7? 2 ♖d5+! ♔c8 3 b5 ♖h4 4 ♖g5 ♖h6+ 5 ♔a7! ♖h7+ 6 ♔a8! ♖h6 7 ♖c5+ wins) 2 ♖c5 (2 ♖h5 ♖b8+! 3 ♔a5 ♔c6 draws) ♖b8+! 3 ♔a5 ♖a8+! 4 ♔b5 ♖b8+! 5 ♔c4 ♖a8 6 ♔b3 ♔d7 followed by ...♖c8 with a clear draw. But Black to play cannot maintain his bind: 1...♔d7 (1...♖a1 2 ♖h5 followed by b5, or 1...♔e6 2 ♔c6 ♔e7 3 ♖b8) 2 ♖b6 ♖a1 3 b5 ♖b1 (3...♖a5 4 ♔b8! and White has shifted the entire position up a rank) 4 ♔a7 (threat ♖b8) ♔c7 5 ♖c6+ ♔d7 6 ♖c5 ♔d6 7 ♖h5 and the pawn moves forward.

However, it is worth emphasizing that these drawing possibilities are very much the exception. In general, White wins if he can maintain his king in front of the pawn while Black's king is off to the side.

## 2.4.2: Black's king is cut off along a file

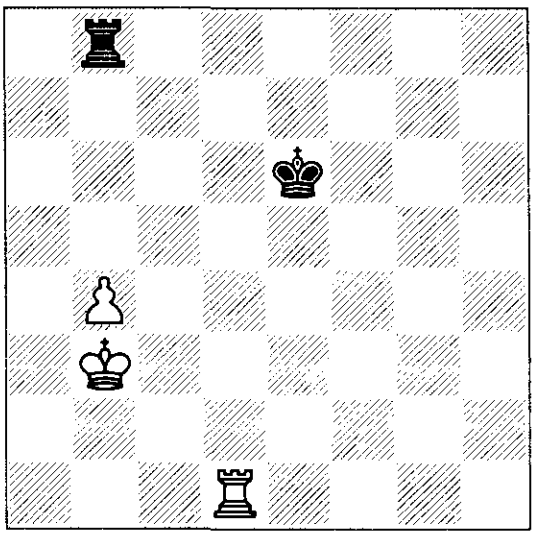
In the first part of this section, we deal with the case in which White's king is not cut off from the pawn. The first important point is that White always wins when Black's king is cut off by three files, regardless of the placing of Black's pieces.

**(240):** It doesn't really matter who is to move; we take Black to play. White wins by advancing his king and then switching his rook behind the pawn at the correct moment: 1...♔f6



240 +/–

*Grigoriev, 1937*



241 =/=

*Chéron, 1923*

(after 1...♖e8 White can exchange rooks, while after 1...♔f8 2 ♔c4 ♖c8+ 3 ♔d5 ♖b8 4 ♖e4 ♔f7 5 ♔c6 Black cannot prevent the advance of the pawn) 2 ♔c4 ♖c8+ 3 ♔d5 ♖b8 4 ♔c5 ♖c8+ 5 ♔d6 ♖b8 (White's king has advanced as far as possible, so now is the moment to switch the rook) 6 ♖f1+ (just being cautious; 6 ♖b1 is also good) ♔g6 7 ♖b1 ♔f7 (or 7...♖b5 8 ♔c6) 8 b5 ♔e8 9 ♔c7 ♖a8 10 b6 and wins.

When Black's king is cut off by two files the situation is more complex, because the result depends on the position of Black's pieces.

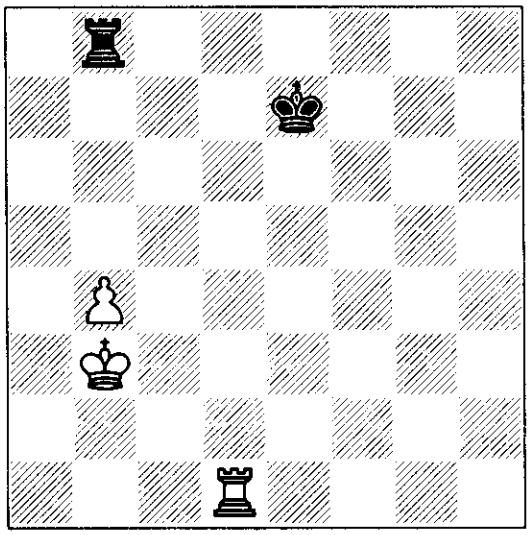
**(241):** This diagram shows the best position for Black's pieces, resulting in a draw with either side to play. With White to move, 1 ♖d4 (after 1 ♔c4 ♖c8+! 2 ♔b5 ♖b8+! 3 ♔c5 ♖c8+! White has to retreat) ♔e5! and now:

1) **2 ♖d7** ♔e6! 3 ♖a7 (3 ♖c7 ♔d6 is easier) ♔d6! (3...♔d5? 4 ♖a6! wins by cutting Black off along a rank) 4 ♔a4 ♔c6! and Black arrives in time.

2) **2 ♔c3** ♖h8 (or any other square on the eighth rank except d8) 3 b5 ♖b8 4 ♖h4 ♔d6! 5 ♔b4 ♔c7! draws comfortably.

If Black is to play, he must take care because he has only one satisfactory waiting move, namely 1...♔e5! (we shall discover that 1...♔e7? loses in the next diagram; this is an important point to remember because with the pawn on b5 Black's king was better on the second rank) 2 ♖d7 ♔e6! and draws as in line 1 above.

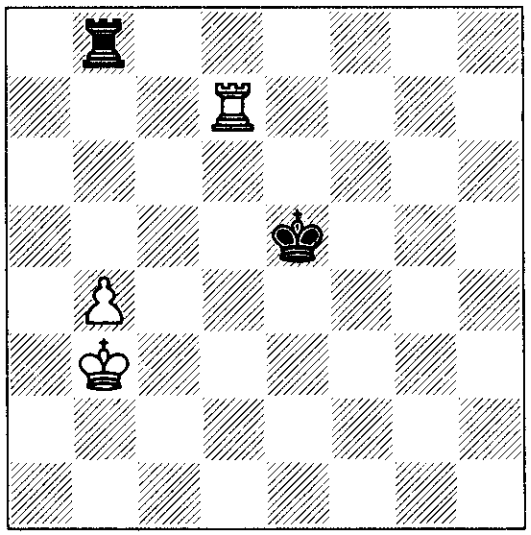
**(242):** Black to play draws by 1...♔e6! reaching the previous diagram. White to play wins by 1 ♖d4! ♔e6 (1...♖c8 2 ♔a4 ♖a8+ 3 ♔b5! ♔e6 4 ♔c5 ♖c8+ 5 ♔b6 ♔e5 6 ♖h4 ♖b8+ 7 ♔c7 followed by b5) 2 ♔c4! (2 ♔a4? ♔e5! 3 ♖d7 ♔e6! 4 ♖a7 ♔d6! draws) ♔e5 (2...♖c8+ 3 ♔b5! wins after 3...♔e5 4 ♖h4 ♔d6 5 ♖h6+ ♔d7 6 ♖h7+ ♔d6 7 ♔a6 or 3...♖b8+ 4 ♔c6 ♖c8+ 5 ♔b7 ♔e5 6 ♖h4 followed by b5) 3 ♖d5+ ♔e6 4 b5 ♖b7 (4...♖c8+ 5 ♖c5! ♖b8 6 ♔b4 ♔d7 7



242 +/=

*Chéron, 1923*

♔a5 wins) 5 ♖c5 ♔d7 6 ♔b4 and we are back to diagram 221.



243 +/=

*Chéron, 1923*

**(243):** In this case Black's king is not on the best square e6. With the king on e5 the result is a draw if White's rook is on d1, but with the rook actively placed on d7 White can win if he moves first. The main line is 1 ♔c4! (we saw the line 1 ♔a4? ♔e6! 2 ♖a7 ♔d6! in the previous diagram) ♔e6 (1...♖c8+ 2 ♔b5 ♖b8+ 3 ♔c5 ♖c8+ 4 ♔b6 ♖b8+ 5 ♖b7! wins) 2 ♖a7 (2 ♖d4 is an alternative win, transposing to the previous diagram) ♔d6 3 b5! ♖c8+ (or 3...♖h8 4 ♔b4!) 4 ♔b4! ♖c7 5 b6 ♖c1 6 ♔b5 and wins. Of course, Black to play draws by 1...♔e6! as in line 1 of diagram 241.

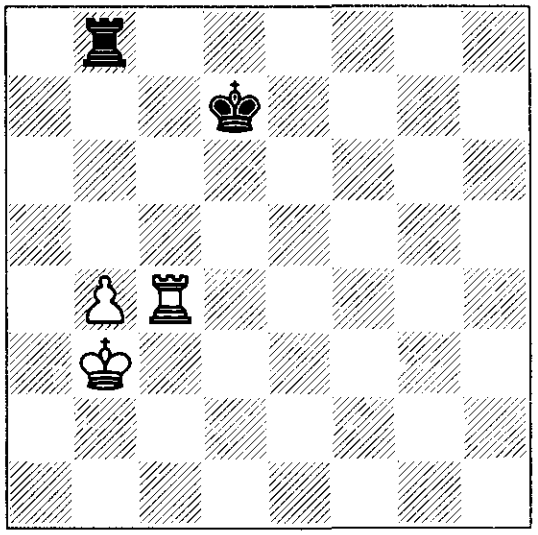
White's winning chances increase if Black's king is even further up the board, for example if Black's king is on e4 then White to play wins even if his rook is on d1. One route to victory is 1 ♖d7 ♔e5 2 ♔c4! as above, although there are other methods, such as 1 ♖d6 ♔e5 2 ♖a6 followed by ♔a4 and b5. Black to play can draw by 1...♔e5!, as in diagram 241.

The conclusion is that the safest square for Black's king is e6, which draws wherever White's rook is. The next best is e5, but in this case White to play can win if his rook is on d7. On e4 and e7 White to move always wins. On e3 and e8 White wins whoever moves first.

If Black's rook is on b7 instead of b8 then Black doesn't have enough checking distance and White to play wins by 1 ♔c4 wherever Black's king is on the e-file.

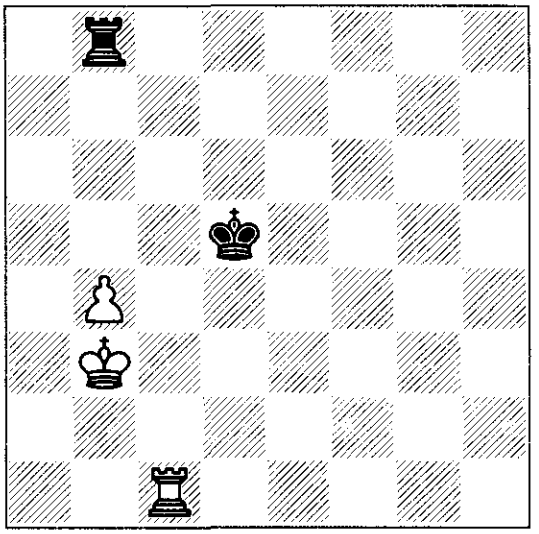
It may come as a surprise, but White can sometimes win even if Black's king is cut off by just one file. Not surprisingly, White needs a favourable initial position to win.

**(244):** In this position White's pawn is defended by the rook, so his king can advance without worrying about checks from Black's rook. White wins by 1 ♔a4! ♖a8+ (1...♖c8 2 ♖xc8 ♔xc8



244 +/=

*Grigoriev, 1937*



245 =/=

*Tarrasch, 1908*
*Deutsche Schachzeitung*

3 ♔a5!) 2 ♔b5! ♔d6 (2...♖b8+ 3 ♔a6 ♖a8+ 4 ♔b7 ♖a4 5 ♖c7+ followed by b5 wins) 3 ♔b6 ♔d5 (White also wins after 3...♖a4 4 ♖c6+ and 3...♖b8+ 4 ♔a7 ♖b5 5 ♔a6!) 4 ♖h4 ♖a4 5 ♖h5+, followed by b5, heading for the Lucena position. Black to play can draw by 1...♖c8. The result is the same if Black's rook is on e8, f8, g8 or h8, i.e. White to play wins by 1 ♔a4! and Black to play draws by 1...♖c8.

If Black's king is on d6, then the position is drawn because 1 ♔a4 may be met by 1...♔d5! 2 ♖c7 ♔d6, as in the next diagram.

**(245):** If White's rook is on c1 then the position is drawn even with Black's king on d5. Suppose White is to move. After 1 ♖c4 Black has to find a waiting move:

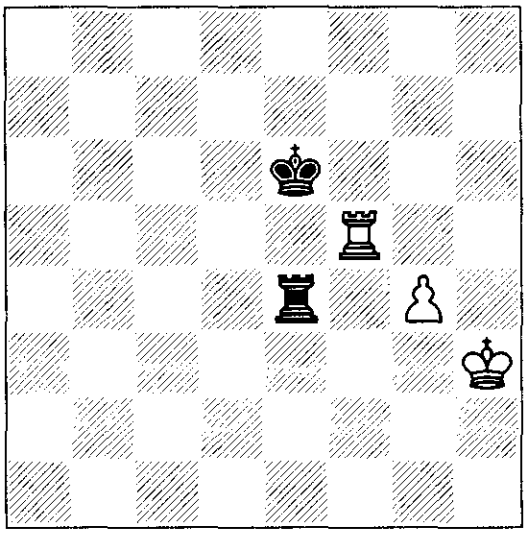
1) **1...♖b7?** (this creates a fatal weakness) 2 ♖c8! (White stops Black regaining his checking distance) ♔d6 3 ♔a4! ♔d7 4 ♖c4 ♖b8 (4...♔d6 5 ♔a5) 5 ♔a5! (5 b5? ♖c8 draws) ♖a8+ 6 ♔b6 wins.

2) **1...♔d6** 2 ♔a4 ♔d5! (2...♖a8+? 3 ♔b5! ♔d5 4 ♖h4 ♖g8 5 ♖h6 ♖b8+ 6 ♔a5 ♖a8+ 7 ♖a6 ♖c8 8 b5 and White wins) 3 ♖c5+ (3 ♖c7 ♔d6) ♔d6! 4 ♔a5 ♖a8+! 5 ♔b5 ♖b8+! (5...♔d7? 6 ♖c4 wins for White) 6 ♔c4 ♖b7 7 b5 ♖c7! draws.

With the rook on c1, the position is also drawn with Black's king on d6, d7 or d8. White can sometimes win when Black's king is on d4, but we consider such positions in section 2.4.3.

We continue with two practical examples which can be solved with the aid of the theoretical ideas developed in the earlier positions.

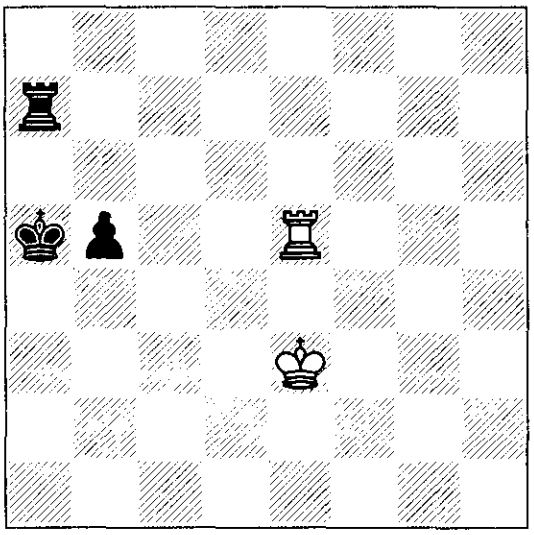
**(246):** Black's problem is that his rook is poorly placed. If it were on a8, for example, the position would be a clear draw as Black is only cut off by one file. 1...♖a4 (a good move, aiming to bring the rook to the first rank; after 1...♖e1? 2 ♔h4! White gains a tempo and wins) 2 ♖f8 (Fischer poses as many problems as possible by stopping



246 /=

**Fischer – Sherwin**

*Portorož Interzonal, 1958*



247 –/

**Tangborn – Nijboer**

*Reykjavik Open, 1990*

...♖a8; after 2 ♔h4 ♖a8! 3 ♖f4 ♔e5! we have the draw of diagram 245) ♔e7! (Black must act at once or White wins by ♔h4!) 3 ♖f3 and now:

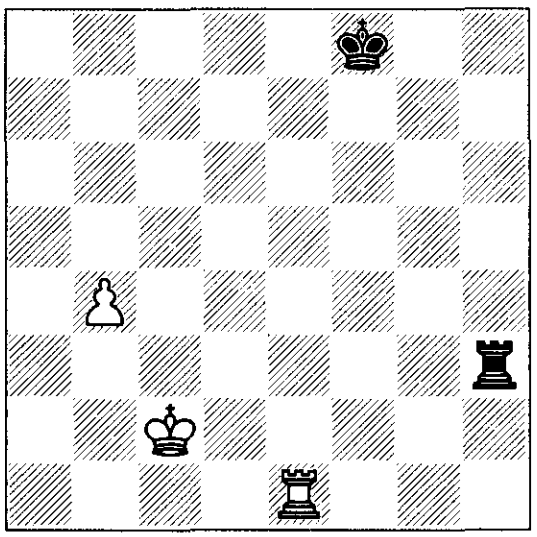
1) **3...♔e6?** (the game continuation; Black fails to appreciate that the situation is changed with the rook on f3) 4 ♔h4! ♖a8 (4...♖a7 sets the trap 5 g5? ♖f7! drawing, but 5 ♔h5 wins) 5 g5! (as we noted in section 2.3.2, White wins if Black's king is cut off by one file, provided Black cannot offer an instant exchange of rooks) ♖h8+ 6 ♔g4! ♔e7 7 g6 ♖f8 8 ♖f5! ♖h8 9 ♔g5 ♖h1 10 ♖f2 ♖h3 11 g7 ♖g3+ 12 ♔h6! ♖h3+ 13 ♔g6! ♖g3+ 14 ♔h7! ♖h3+ 15 ♔g8! 1-0.

2) **3...♖a8!** (Black should just continue with his plan; his king is not on the optimal square e6, but he can still hold the draw because White's rook is on f3 and not f4) 4 ♔h4 (4 g5 ♖f8) ♖h8+! draws.

(**247**): White's problems are familiar from the preceding example. If his rook were on f5, he could draw by 1 ♖f1! ♖d7 2 ♖a1+! ♔b6 3 ♖b1!, reaching diagram 241. Unfortunately his king blocks the route to the first rank and this is enough to render his position lost. The game continued 1 ♔d2 (1 ♔d3 and 1 ♔d4 are also met by 1...♖c7) ♖c7! 2 ♖e1 ♖c5! (this is diagram 244) 3 ♔d3 ♔a4?! (maintains the win, but this both loses time and forces Black to play accurately; White can no longer oppose rooks on c1 so 3...b4 was quickest, as in Fischer-Sherwin) 4 ♔d4 ♖c4+! (Black must be precise; 4...♖h5? 5 ♔c3! and 4...♖c2? 5 ♖a1+! are drawn) 5 ♔d3 ♔a3! 6 ♖e5 (the best defence; if White waits by 6 ♖f1, Black plays 6...♖c8 and the black pawn advances) ♔b4 7 ♖e1 (once again White holds up the threat of ...♖c8) ♖c3+! 8 ♔d2 (8 ♔d4 ♖a3 followed by ...♔a4 and ...b4 wins) ♖c5 (8...♔c4 was simpler, because ...b4 cannot be prevented) 9 ♔d3 ♔a3 10 ♔d4 (or 10 ♖e3 ♔b2 11 ♖e2+ ♔b3

followed by ...b4) ♖c8 11 ♖e3+ ♔b4 (11...♔a4 followed by ...b4 was also good, but Black plays safe and forces White's king back) 12 ♖e5 ♖d8+ 13 ♔e3 ♔a4 0-1. With his king cut off by two files and ...b4 imminent, White decided to give up.

We move on to the situation in which Black's king is cut off on a file, but White's king is itself cut off along a rank. Black's rook may be on either the third rank or the second rank. When the rook is on the third rank the critical cut-off distance is three files. In this case the safest squares for Black's king are f7 and f6, but the following position shows that Black can usually draw even if his king is on f8.

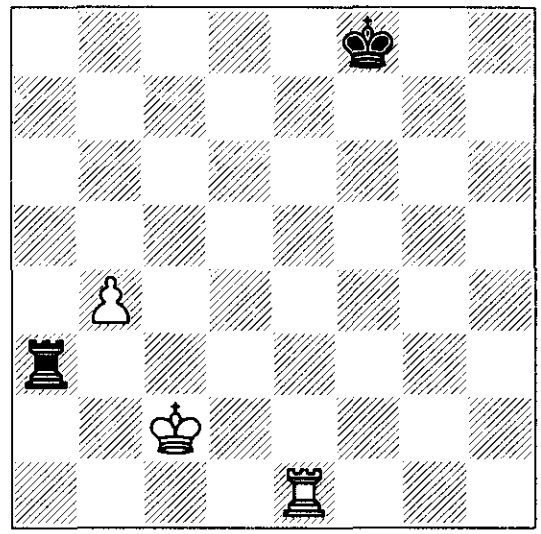


248 =/=

*Grigoriev, 1937*

**(248):** 1 b5 (1 ♖e5 ♔f7 2 b5 ♔f6 3 ♖e8 ♖h5 4 b6 ♖b5 draws after 5 ♖b8 ♔e7 or 5 ♖h8 ♔e6, but not 5...♔e7? in this latter line due to 6 b7!) ♖h5! (1...♔f7? 2 b6! ♖h6 3 ♖b1! ♖h8 4 ♔b3 ♔e7 5 ♔b4! ♔d7 6 ♖c1! ♖c8 7 ♖c5! wins) 2 b6 (2 ♖b1 ♔e7) ♖c5+! 3 ♔d3 ♖b5! 4 ♖e6 ♔f7 5 ♔c4 ♖b1 6 ♖h6 ♔e7 7 b7 ♔d7! drawing.

However, White can win against the king on f8 if Black's rook is also unfavourably placed.

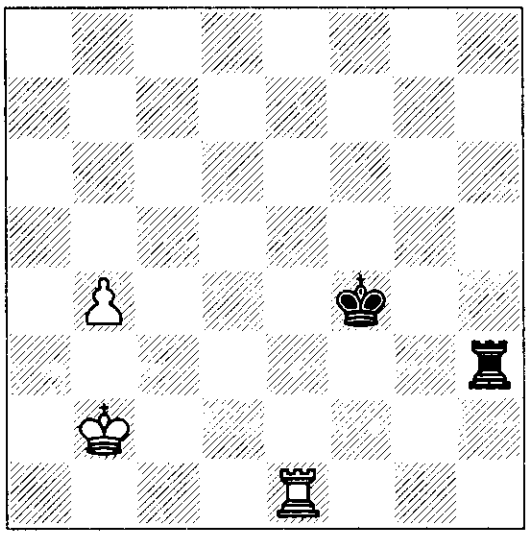


249 +/=

**(249):** In this position 1 b5! ♖a5 (1...♔f7 2 b6! ♖a8 3 ♔c3 ♖b8 4 ♖b1! ♔e7 5 ♔c4! ♔d7 6 ♔b5! ♔c8 7 ♖h1 wins, as in diagram 197) 2 ♖e5! (2 ♖b1? ♔e7 draws) ♔f7 3 ♔b3 ♔f6 4 ♔b4 ♖a8 5 ♖e1 is a simple win. Black to play draws by 1...♖h3. It must be emphasized that this win is only possible in the very special situation of diagram 249; moving Black's king to f7 or his rook to f3 or g3 restores the draw of diagram 248.

If Black's king is a long way up the board then he is again in danger of losing. The following positions deal with the critical situation with Black's king on f4 (the results with the king on f5 may be deduced from the analysis below).

**(250):** White to play must continue accurately:



250 +/=

*Grigoriev, 1937*

1) **1 ♔a2?** ♖d3! (not 1...♖c3? 2 ♔b2! and White gets a chance to correct his mistake, nor 1...♔f5? 2 b5! ♔f6 3 b6! ♖h8 4 ♔a3! ♖b8 5 ♖b1! with the familiar line leading to diagram 197) 2 b5 ♖d5! 3 ♖b1 ♔e5! (moving into the square of the pawn so as to meet b6 by ...♖a5+ and ...♖b5+) 4 ♔a3 ♔d6! 5 b6 ♔c6! 6 b7 ♖a5+! drawing.

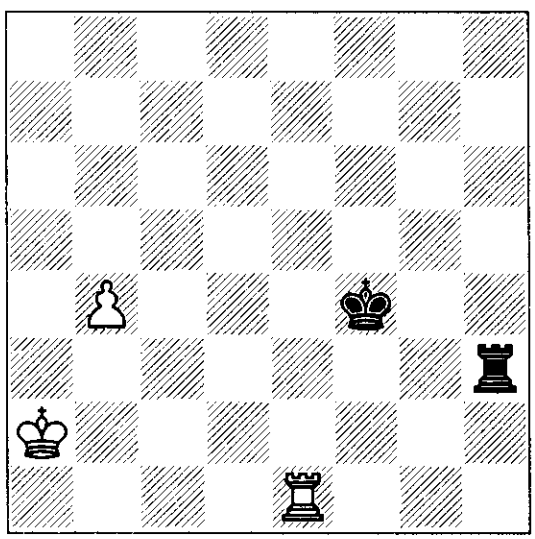
2) **1 ♖e8?** (this move makes little difference to the situation) ♔f5! (the threat was ♔c2 followed by b5) 2 b5 (2 ♔c2 ♔f6 draws) ♖d3! 3 b6 ♖d6 4 ♖b8 ♔e6 5 b7 ♖b6+ followed by ...♔d7.

3) **1 b5?** ♖h5 loses the pawn.

4) **1 ♔c2!** (just as with 1 ♔a2?, White gives himself the option of playing the rook behind the pawn, but this time he prevents ...♖d3) ♔f5 (1...♖g3 2 b5 ♖g5 3 b6! ♖c5+ 4 ♔d3 ♖b5 5 ♖e6! ♔f5 6 ♔c4 ♖b1 7 ♖h6 followed by ♔c5 wins) 2 b5! ♔f6 (2...♖a3 3 b6! ♖a8 4 ♔c3, etc.) 3 b6! ♖h5 (3...♖h8 4 ♔c3) 4 ♖b1! ♖h8 5 ♔c3 ♔e6 6 ♔b4! (6 ♔c4? ♔d7! 7 ♔b5 ♔c8! draws) ♔d7 7 ♖c1! ♖c8 8 ♖c5! wins.

Black to play draws by 1...♔f5! (Black rushes back with his king before White gets a chance to play ♔c2 and b5) 2 b5 (2 ♔c2 ♔f6 3 b5 ♖h5! 4 ♖b1 ♔e6 5 b6 ♖h8 draws) ♖d3! (the only move; the threat was 3 ♔c2 transposing to line 4 above and 2...♔f6? loses to 3 b6! ♖h8 4 ♔c3 ♖b8 5 ♖b1! ending up with diagram 197) 3 ♖b1 (3 ♔c2 ♖d5! 4 ♖b1 ♔e6 5 b6 ♖d8 draws) ♔e6 4 b6 ♖d8! 5 ♔a3 ♔d7 6 ♖d1+ ♔e7 7 ♖c1 ♖b8 8 ♖b1 ♔d7 draws.

This analysis may appear somewhat confusing, but the crucial point is that it is bad for Black to have his king on the same rank as White's pawn, because this cuts out defences based on attacking the pawn from the side. Therefore, when Black has a spare move he should play ...♖d3, since then the rook can operate freely from the side without having one rank blocked by Black's king. This logic is also relevant in the following position.



251 +/=

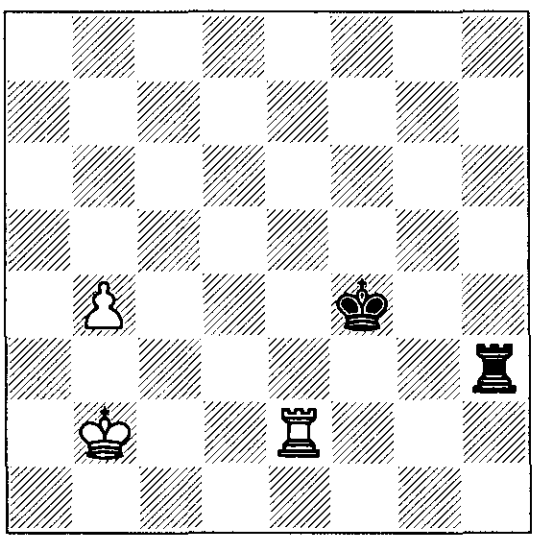
*Chéron, 1944*

**(251):** After 1 b5? ♖h5! 2 ♖b1 ♔e5! 3 ♔a3 ♔d6! 4 b6 ♔c6 Black draws as in line 1 of the previous diagram. 1 ♔b2? is also bad, as 1...♔f5! draws as above. The only winning move is 1 ♖e2! and now:

1) **1...♖g3** (1...♖d3 is met the same way) 2 b5! (this is the threat) ♖g5 3 b6! (possible now that the rook is on e2 because ...♖a5+ may be met by ♔b1) ♖a5+ 4 ♔b1! ♖a8 5 ♔b2 ♔f5 (5...♖b8 6 ♖e6! ♔f5 7 ♖h6! wins after 7...♔g5 8 ♖c6 or 7...♔e5 8 ♔b3 ♔d5 9 ♔b4!) 6 ♔c3! ♖b8 7 ♖b2! ♔e6 8 ♔c4! ♔d7 9 ♔b5! and we will arrive at diagram 197.

2) **1...♔f5** (Black counters the threat of line 1 by preventing the move ♖e6, but unfortunately he blocks the fifth rank and cannot attack the pawn from the side) 2 b5! winning as in line 1 of diagram 250.

Black to move draws by 1...♖d3! transposing into variation 1 of diagram 250.



252 +/=

*Chéron, 1944*

**(252):** The previous analysis helps with this position. With the rook on e1 (diagram 250) White drew with 1 ♔a2? and won with 1 ♔c2!, but now the situation is reversed. White can win with 1 ♔a2! (diagram 251), but 1 ♔c2? only draws after 1...♔f5 2 b5 ♖a3! 3 ♖e1 (3 b6 ♖a6! 4 b7 ♖b6! 5 ♖e7 ♔f6! 6 ♖h7 ♔e5 draws; the problem with having the rook on e2 is that White cannot play his rook to the b-file in reply to 3...♖a6!) ♖a5! 4 b6 (4 ♖b1 ♔e6! 5 b6 ♖a8 draws) ♖c5+! and ...♖b5 winning the pawn.

Black to move can draw by 1...♖d3 or 1...♔f5.

The tables on the following page give all this information in a convenient form.

To summarize, the worst square for White's king is b2 (because the rook cannot defend the pawn from behind). If White's rook is on e1, then c2 is better than a2 (because ...♖d3 is prevented), while if it is on e2, then a2 is better than c2 (because ...♖a3 is prevented and White has ♔b1 and ♖b2 after ...♖a5+ and ...♖b5+).

When Black's king is cut off by four files, he loses whatever the location of the remaining pieces.

**(253):** It doesn't matter who is to move because Black cannot improve his position. We take Black to play: 1...♖h3 2 b5 ♖h5 3 ♖b1! ♔f6 4 b6 ♖h8 5 ♔c3 ♔e6 6 ♔b4! ♔d7 7 ♖c1! ♖c8 8 ♖c5! transposes into a line we have seen many times before in the above analysis.

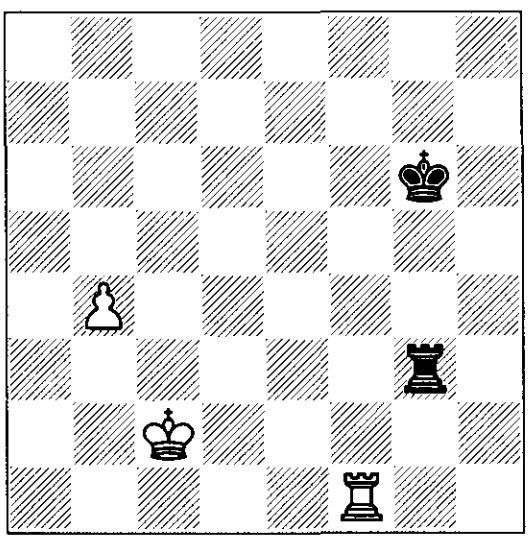
White's winning chances are severely reduced when Black's rook is

**In all cases B♖h3 and W♙b4 (W=White to play; B=Black to play):**

| B♔f4 | W♔a2 | W♔b2 | W♔c2 |
|---|---|---|---|
| **W♖e1** | W:Win (1 ♖e2!)<br>B: Draw (1...♖d3!) | W:Win (1 ♔c2!)<br>B: Draw (1...♔f5!) | W: Win (1 b5)<br>B: Loss |
| **W♖e2** | W:Win (1 b5!)<br>B: Loss | W: Win (1 ♔a2!)<br>B: Draw (1...♔f5 or 1...♖d3) | W: Win (1 b5)<br>B: Draw (1...♔f5 or 1...♖a3) |

| B♔f5 | W♔a2 | W♔b2 | W♔c2 |
|---|---|---|---|
| **W♖e1** | W:Win (1 b5!)<br>B: Draw (1...♔f6 or 1...♖d3/c3) | **Draw** | W: Win (1 b5!)<br>B: Draw (1...♔f6 or 1...♖a3) |
| **W♖e2** | W:Win (1 b5!)<br>B: Draw (1...♔f6 or 1...♖d3/c3) | **Draw** | **Draw** |

**B♔f6, f7 or f8: Always Drawn**

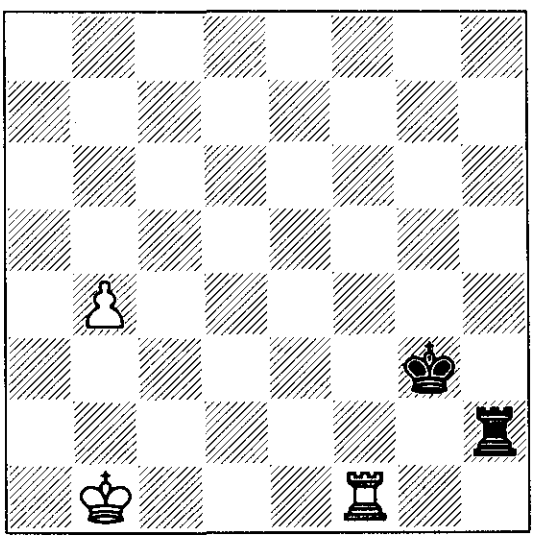


253 +/–

*Original*

operating on the second rank. Usually four files are not enough, although

White can sometimes win if Black's pieces are very badly placed.



254 +/=

*Original*

**(254):** This is a critical position. White to play can try:

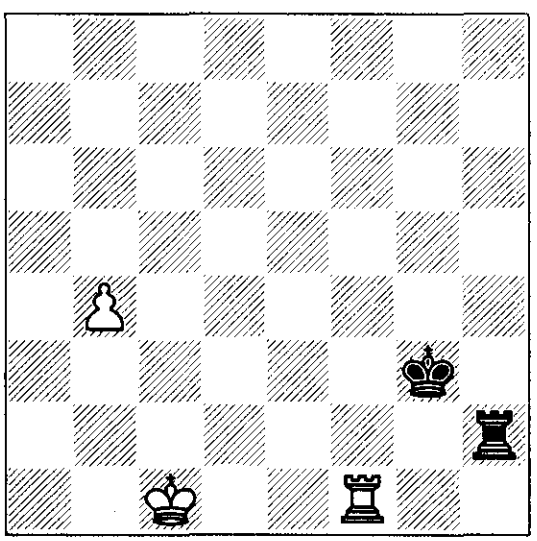
1) **1 ♔a1?** ♖h4 2 ♖b1 ♔f4! 3 b5 ♔e5 4 ♔a2 ♔d6 5 b6 ♖h8 and Black draws.

2) **1 ♖f5?** (threat 2 b5 ♔g4 3 ♖c5 ♖h6 4 ♔c2 and Black's king is cut off on a rank) ♔g4! 2 ♖c5 ♔f4! (2...♔f3? 3 ♖c2! ♖h5 4 ♔b2 ♔e4 5 ♔b3 ♖g5 6 ♖c4+ ♔d3 7 ♖h4 followed by ♔a4 and b5) 3 ♖c2 (3 b5 ♔e4 4 b6 ♖h8! 5 ♔b2 ♔d4! draws) ♖h8 4 ♔b2 ♔e5! 5 ♔b3 (5 ♖d2 ♔e6 draws) ♔d6 6 b5 (6 ♔a4 ♖a8+!) ♔d7 7 ♔b4 ♖c8! and Black draws.

3) **1 ♖f8?** ♖h4! 2 ♖b8 ♔f4! 3 ♔b2 ♔e5 4 ♖b6 ♖h3!, followed by ...♔d5, and White's king is cut off.

4) **1 ♖f6?** ♖h4! 2 ♖b6 ♔f4 3 ♔b2 ♖h3! 4 ♖e6 ♔f5, followed by ...♔f6, and Black reaches the safety zone.

5) **1 ♔c1!** *(D)* (by avoiding a check when Black's rook arrives on the b-file, White threatens to win by 2 b5 ♖h5 3 b6 ♖b5 4 ♖f6! ♔g4 5 ♔c2) and now:



254a +/–

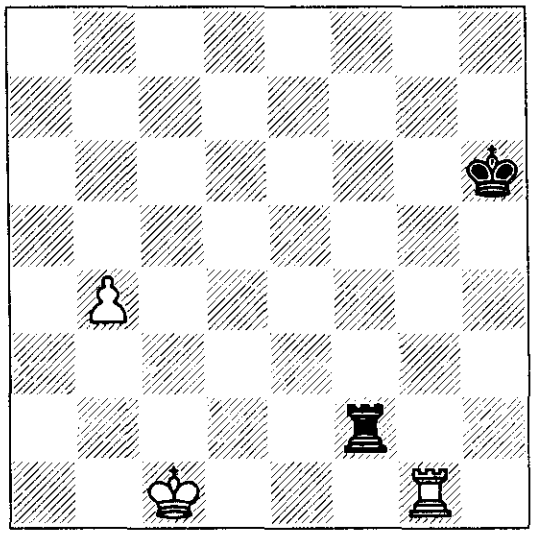
5a) **1...♖a2** 2 ♖f8 (curiously enough, 2 ♖f6 ♔g4 3 b5! ♔g5 4 b6 also wins because after 4...♖a8 5 b7! ♖b8 White can play 6 ♖b6!, but 2 ♖f7? leads to a draw after 2...♔g4! 3 b5 ♔g5 4 b6 ♖a8 5 ♔c2 ♖b8! 6 b7 ♔g6! and Black is just in time) ♖a4 (2...♔g4 is much too slow because 3 b5 already threatens to promote) 3 b5 ♖b4 4 ♖f5! ♔g4 5 ♖c5 ♔f4 6 ♔c2 ♔e4 7 ♔c3 ♖b1 8 ♖h5 and the king moves up to support the pawn.

5b) **1...♔g4** 2 ♖f8! (a hard move to find, but line 5a gave us a clue; here 2 ♖f6? is no good because Black can immediately attack the rook by 2...♔g5!) ♔g5 3 b5! ♖h4 (3...♖h7 4 ♖b8! ♖c7+ 5 ♔d2 ♔f6 6 b6! ♖d7+ 7 ♔c3! ♔e6 8 ♔c4 ♔d6 9 ♔b5 wins by one tempo) 4 ♔c2 ♖b4 5 ♖b8! ♔f6 6 ♔c3! ♖b1 7 ♔d4 ♔e6 8 ♔c5! followed by ♔b6 wins.

Black to play can draw by 1...♖h4 winning the pawn, but it is worth noting that 1...♔g4 2 ♔c1 ♔g5 3 ♖f8 ♖h4 4 b5 ♖b4 5 ♖b8 ♔f6 also draws. It follows that moving Black's king to g4 turns diagram 254 into a draw whoever moves first.

White always wins when Black's king is trapped on the h-file, except if Black to play can win the pawn immediately.

**(255):** Black to move can win the pawn by 1...♖f4!, so we take White to play. The winning method is 1 ♖g3 (so that ♖b3 becomes possible), when both 1...♔h5 2 b5 ♖f8 3 b6 ♖b8 4 ♖b3! ♔g5 5 ♔b2 ♔f5 6 ♔c3 ♔e6 7 ♔c4! ♔d7 8 ♔b5! and 1...♖f4 2 ♖b3! ♔g6 3 b5 ♖f8 4 b6 ♖b8 lead to

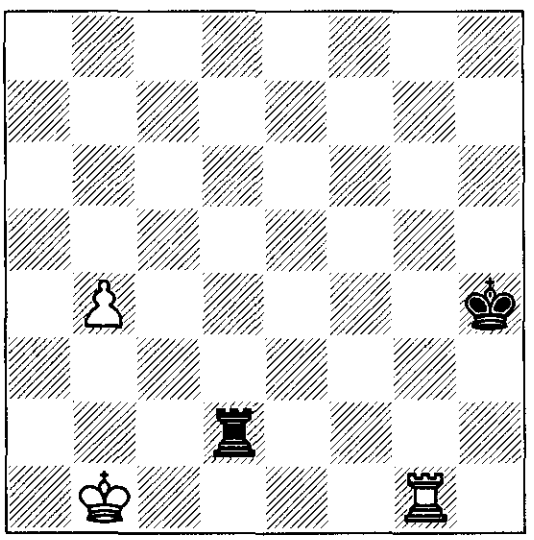


255 +/=

*Original*

diagram 197. If we move Black's king to h4 White cannot play 1 ♖g3, but he has an alternative win by 1 ♖g6 ♔h5 (1...♖f4 2 b5 ♔h5 3 ♖c6 is the same) 2 ♖c6 ♔g5 3 b5! ♖f8 4 ♔c2 ♔f5 5 ♔c3 ♔e5 6 ♔c4, cutting off Black's king.

Some of the above winning lines don't work when White's king is on b1 instead of c1, because Black has a check on the b-file. However, in this case White can win another way.



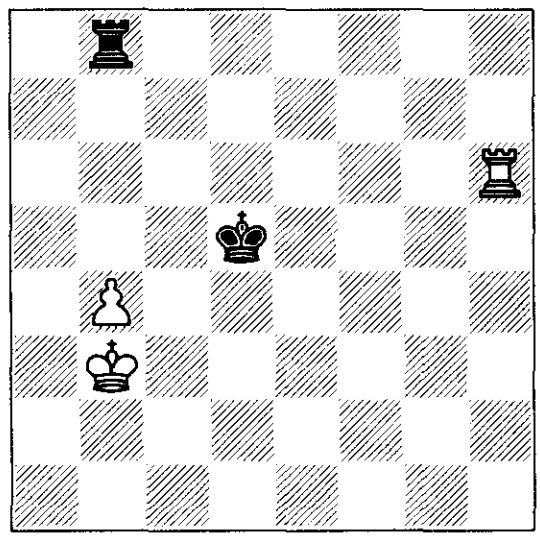
256 +/=

*Original*

**(256):** Black to play can draw by 1...♖d4!, while White to play wins by 1 ♔a1 (threat 2 b5) ♖d4 2 ♖b1 ♔g5 3 ♔a2 (not 3 b5? ♔f6 4 b6 ♖d8! drawing) ♔f6 4 ♔a3 ♔e7 5 ♔a4 ♔d7 6 ♖c1! and, thanks to the badly placed black rook, there is no way to stop ♔a5 and b5.

### 2.4.3: Black's king is cut off along a rank

We have already seen several examples of this idea in section 2.4.2 and it often happens that as play proceeds White's rook cuts off Black's king in different ways. Here we assume that Black's king is cut off along a rank in the starting position.

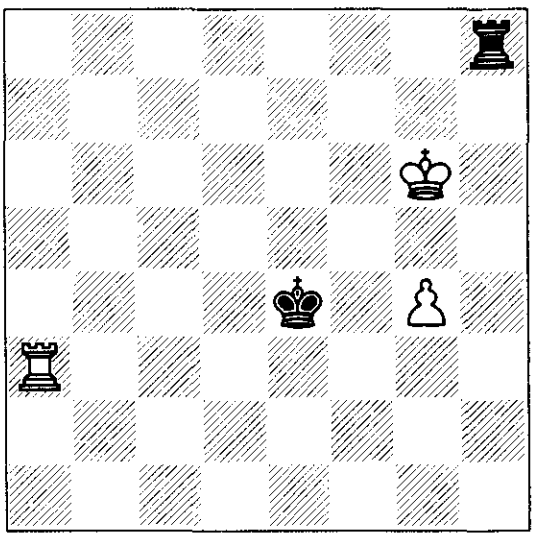


257 +/=

*Original*

**(257):** In diagram 245 we saw that the position with White's rook on the c-file and Black's king on d5 is drawn. If Black's king is cut off along a rank the result depends on whether the white king can reach a4. In the diagram,

White to play wins by 1 ♖a6 (taking control of the a-file) ♖c8 (Black has no constructive moves) 2 ♔a4 ♖c1 3 ♔b5 ♖c2 4 ♖h6 ♖b2 5 ♔a5 and White can edge the pawn forwards. Black to play draws with 1...♖a8! 2 ♖g6 ♖a7 and White is unable to make any progress.



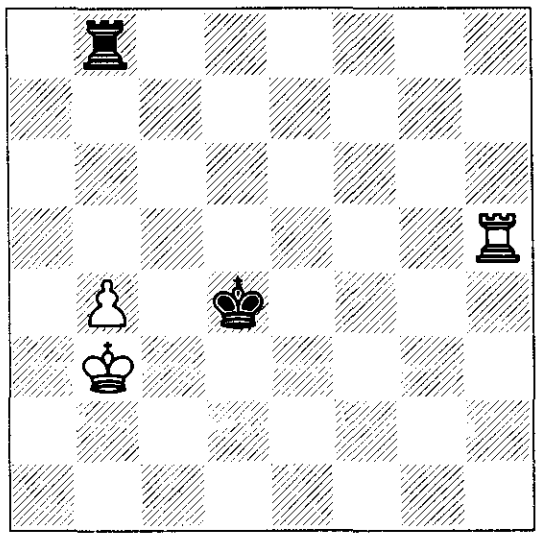
258 /=

**Taimanov – Larsen**

*Palma de Mallorca IZ, 1970*

**(258):** In the game Black continued 1...♖g8+! 2 ♔h5 ♖h8+! 3 ♔g5 ♖g8+! (3...♔e5? 4 ♖a6 wins as in the previous diagram) 4 ♔h4 and now Larsen played 4...♔e5?, losing after 5 ♖a6! (reaching diagram 257) ♔f4 6 ♖f6+ ♔e5 7 g5 1-0. He could have reached the draw in diagram 257 by 4...♖h8+ 5 ♔g3 ♔e5! 6 ♖a6 (6 ♖f3 ♖g8) ♖h7, and there was a second drawing line in 4...♔f4 5 ♖a4+ ♔f3, followed by checking along the eighth rank.

**(259):** With the king on d4 White always wins. We take Black to play: 1...♖c8 (1...♖a8 2 b5 ♖a1 3 ♔b4) 2 b5 ♖c5 3 ♖h4+! ♔d5 (3...♔d3 4 b6) 4 ♔b4 ♖c1 5 ♖h6 and White wins as in diagram 257.

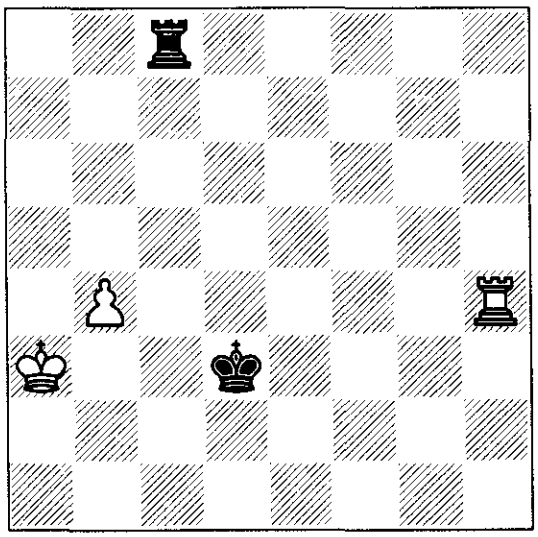


259 +/–

*Tarrasch, 1908*

*Deutsche Schachzeitung*

Knowing this position helps to find the correct move in many other situations.



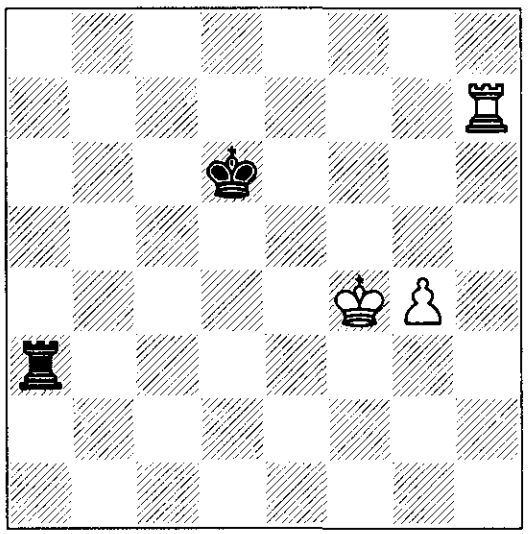
260 +/–

*Chéron, 1944*

**(260):** We take Black to move. White wins after 1...♔c3 (the threat was 2 ♔b3 ♖b8 3 ♖h5, followed by b5) 2 ♖h5! (2 b5? ♖a8+ 3 ♖a4 ♖b8! 4 ♖a5

♔c4 5 ♔a4 ♖b6 draws) ♔c4 3 ♔a4 (the threat is ♖a5-a6, followed by b5 and ♔a5) ♖b8 (3...♖c7 4 ♔a5 followed by b5 wins more quickly) 4 ♖c5+! ♔d4 5 ♔b3 leading to diagram 259.

If White's king is already well-placed, then he can sometimes win if Black's king is cut off along the seventh rank.



261 /–

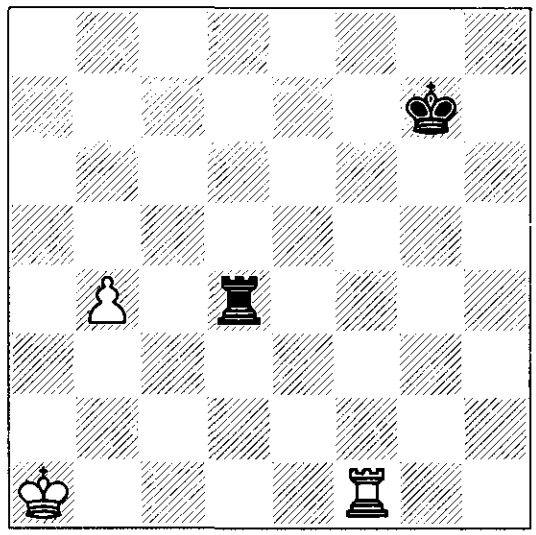
**Vistaneckis – Burliaev**
*USSR 1966*

(**261**): If Black's rook were on a8, then he could draw by 1...♔e6 2 g5 ♖a4+, but he is one tempo short of saving the game. The game concluded 1...♖a5 (1...♔e6 2 ♔g5! ♖g3 3 ♖g7 ♖g1 4 ♔h6 ♖g2 5 g5 ♖h2+ 6 ♔g6! ♖g2 7 ♖a7 ♖g1 8 ♔h6 and the pawn gradually advances, or 1...♖a8 2 ♔f5 ♖f8+ 3 ♔g6 winning) 2 g5! ♔e6 3 ♔g4! ♖a8 4 ♔h5 ♔f5 5 ♖f7+ ♔e6 6 ♖f3 (6 g6 was quicker) 1-0.

Black can only draw this position if his rook starts on a8, b8, c8 or the fifth rank. In each case 1...♔e6 is the drawing move.

## 2.4.4: Other situations

We first consider some positions in which White's rook can switch behind the pawn.



262 +/

*Chéron, 1952*

(**262**): Let us fix White's king on a1 and pawn on b4, and Black's king on g7. We will vary the position of the black rook along the fourth rank and move White's rook between f1, f2 and f3. The table on the following page gives the results (White is to play, of course).

Black has better chances if his king is on g6. In this case White can only win when Black's rook is on d4 and White's rook is on f1 or f2.

Once again Chéron was responsible for the original analysis, but I will give the results in a somewhat different form both because Chéron's analysis was incomplete and because he made some mistakes (for example, he gave the position with W♖f3 v B♖d4 as winning for White).

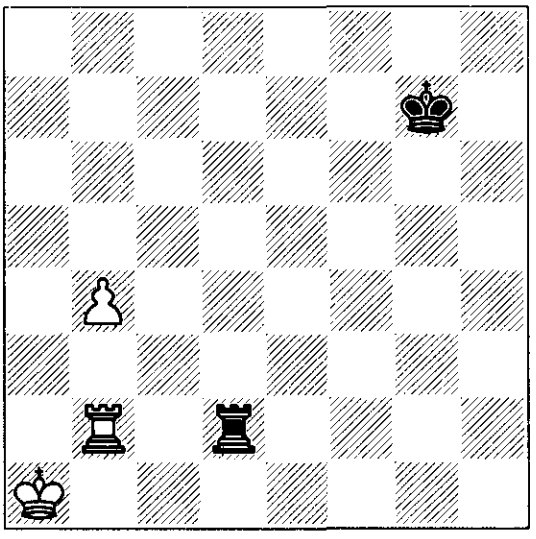
**In all cases W♔a1, ♙b4 and B♔g7: White to move**

| | B♖d4 | B♖e4 | B♖g4 |
|---|---|---|---|
| **W♖f1** | Win: 1 ♖b1! | **Draw** | **Draw** |
| **W♖f2** | Win: 1 ♖b2! | **Draw** | Win:1 b5! ♖g5 2 b6! |
| **W♖f3** | **Draw** | Win: 1 b5! ♖e5 2 ♖b3! | **Draw** |

**B♖c4, B♖h4: Always drawn**

We take the position of diagram 262 first. The winning line is 1 ♖b1! and now:

1) **1...♖d2** 2 ♖b2! *(D)* (2 b5? ♔f7 3 b6 ♖d8! 4 ♔a2 ♔e7 5 ♔a3 ♔d7 6 ♖d1+ ♔e7 draws) and now:



262a +/–

1a) **2...♖d8** 3 ♔a2! ♔f7 4 ♔b3! (not 4 ♖e2? ♖d3! drawing as in diagram 248, nor 4 ♔a3? ♖a8+! 5 ♔b3 ♔e6! 6 ♖d2 ♖b8! drawing as in diagram 241; note that 5...♔e6! is the only move because 5...♔e7? 6 ♖d2! wins as in diagram 242) wins because a three file cut-off is enough to win. Black cannot prevent this since after 4...♔e7 5 ♖e2+ Black's king must return to the f-file. This explains why the d-file can be bad for Black's rook.

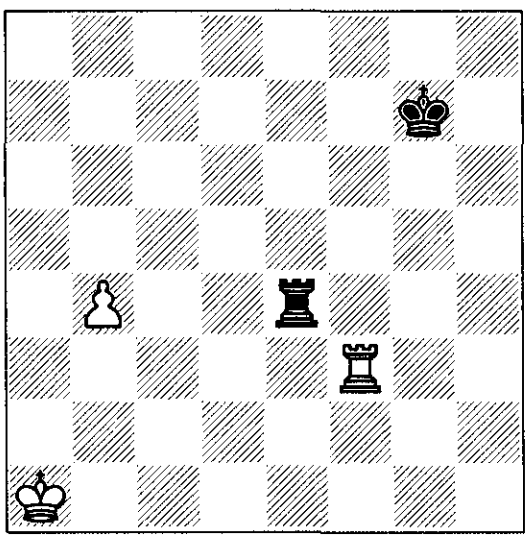
1b) **2...♖d3** 3 ♔a2! ♔f7 4 ♖b3! (not 4 b5? ♔e7 5 b6 ♖d8!) ♖d2+ (4...♖d8 5 ♖e3! wins because Black's rook cannot cut off White's king by returning to the third rank) 5 ♔a3! ♔e7 6 ♖c3 ♔d7 (6...♖d8 7 ♖e3+ gives the three file cut-off and 6...♖d7 7 ♔a4 ♖a7+ 8 ♔b5! ♖a8 9 ♖c4 ♔d6 10 ♔b6 transposes to diagram 244) 7 ♔a4 ♖a2+ 8 ♔b5! ♖a8 9 ♖c4 ♔d6 10 ♔b6 is diagram 244 again.

2) **1...♔f7** 2 ♔a2! ♔e7 (2...♖d3 3 ♖b3! as in line 1b) 3 ♔b3 ♔d7 4 ♖c1! ♖h4 (4...♖d6 5 ♔a4! is similar since Black cannot offer the exchange of rooks) 5 ♔a4! ♖h8 6 ♖c4! ♖a8+ 7 ♔b5! and we end up with the same position as in line 1a.

Now suppose White's rook starts on f3. The position is drawn after 1 ♖b3 ♖d8! 2 ♔b2 (2 ♔a2 ♖b8! 3 ♖b2 ♔f7 4 ♔b3 ♔e7 5 ♖d2 draws because Black is only cut off by two files) ♖b8!

(2...♔f7 3 ♖e3! wins) 3 ♔c3 (3 ♔a3 ♖a8+! 4 ♔b2 ♖b8!) ♔f7 4 ♔c4 (if White could play his rook to the e-file he would win, but when the rook is on the third rank this is impossible) ♔e6! (4...♔e7? 5 ♖d3! wins) 5 ♖d3 (5 ♔c5 ♔d7!) ♖c8+, just as in diagram 241.

We can also see why 1 ♖b1 only wins when Black's rook is on d4. If the rook starts on e4, g4 or h4 play continues 1 ♖b1 ♔f7 2 ♔a2 ♔e7 3 ♔b3 ♔d7 4 ♖c1 ♖e8! (or g8/h8 if the rook starts on g4/h4) with a simple draw. The position is also drawn when Black's rook starts on c4, but the play is different. Let's suppose White's rook is on f1. Play continues 1 ♖b1 ♔f7 2 ♔a2 ♔e6 (but not 2...♔e7? 3 ♔b3! ♖c8 4 ♖d1! winning as in diagram 242) 3 ♔b3 ♖c8! 4 ♔a4 (4 ♖d1 ♖b8! leads to diagram 241) ♖h8 5 ♔a5 (5 ♔b5 ♔d7! is the same) ♔d7! (5...♔d6? 6 ♔b6! wins) and now 6 ♖c1 ♖a8+!, 6 b5 ♔c7 and 6 ♔a6 (6 ♔b6 ♔c8!) ♔c8! (6...♔c7? 7 ♔a7! wins) 7 ♔a7 ♖h7+! 8 ♔a8 ♔c7 all lead to a draw.



263 +/

*Chéron, 1952*

**(263):** We have shown that the plan with 1 ♖b3 offers no hope when the black rook is on e4, but White can win by 1 b5! ♖e5 (1...♖b4 2 ♖f5! ♔g6 3 ♖c5 ♔f6 4 ♔a2! ♔e6 5 ♔a3! ♖h4 6 ♖c7! ♔d5 7 ♖c8 ♖g4 8 ♔b3 wins as in diagram 219) 2 ♖b3! ♔f7 3 b6 ♖e8 (3...♖a5+ 4 ♔b2! ♖a8 5 b7 ♖b8 6 ♔a3! and the king reaches a6) 4 ♔b2 ♖b8 5 ♔a3 ♔e7 6 ♔a4! ♔d7 7 ♔b5! leading to diagram 197.

However, if White's rook is on f2 this plan doesn't work: 1 b5 ♖e5! and now:

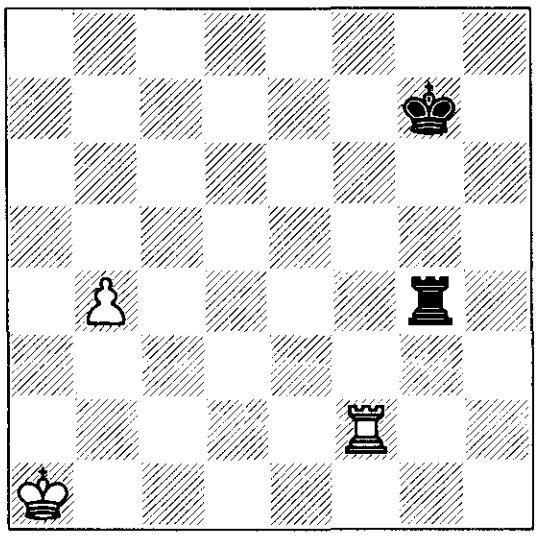
1) **2 ♖b2** ♔f7 3 b6 ♖a5+! (not 3...♖e8? 4 ♔a2! winning as before) 4 ♔b1 (4 ♖a2 ♖b5! repeats the position) ♖a8! (Black gains a tempo as White's king could not move to b2) 5 ♔c2 ♔e7 and Black's king reaches c6.

2) **2 b6** ♖e8! (after 2...♖a5+? 3 ♖a2! White is a tempo ahead of line 1 and wins by 3...♖b5 4 ♖b2! ♖a5+ 5 ♔b1! ♖a8 6 b7 ♖b8 7 ♔a2!) and now both 3 ♔a2 ♖a8+! and 3 ♖b2 ♖a8+! result in White's king being forced to b1, transposing to line 1.

With the rook on f1 the move 1 b5 is absolutely impossible because of 1...♖a4+.

**(264):** Once again the situation is clear with the rook on f1, so we need only consider f2 and f3. It is indeed a paradox that moving Black's rook from e4 to g4 causes the results to be reversed. Now White wins with his rook on f2, but draws with it on f3. Suppose the rook is on f2. White wins by 1 b5! and now:

1) **1...♖g5** 2 b6! (after 2 ♖b2? ♔f7 3 b6 Black can draw either by 3...♖a5+



264 +/

*Original*

as in the previous diagram, or alternatively by 3...♖g8) ♖a5+ (with the rook on the g-file Black has no choice, because it cannot return to the first rank) 3 ♖a2! winning as in line 2 of the previous diagram.

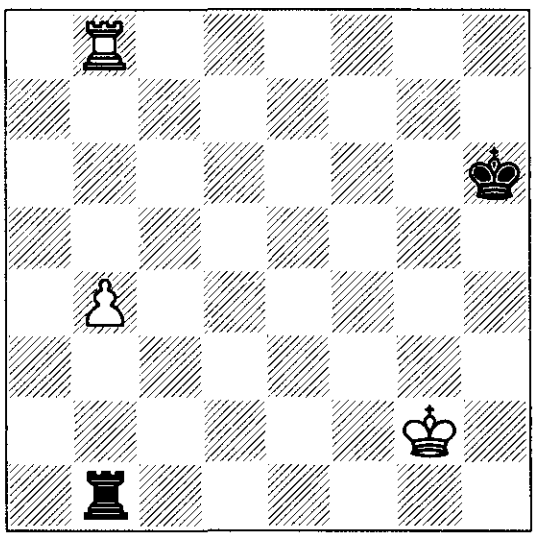
**2) 1...♖b4** 2 ♖f5! transposes to the previous diagram.

However, with White's rook on f3 Black can draw by 1 b5 ♖g5! 2 b6 ♖b5! winning the pawn.

It is now possible to explain all the results in the table given on page 154. Playing the rook to the b-file on move 1 only wins when Black's rook is on d4, because in this case Black's king is on d7 when the rook needs to return to the first rank. 1 b5 followed by playing the rook to the b-file on move 2 only wins when Black's rook is on e4, because Black cannot play his king to the e-file when his rook is on e8. Finally 1 b5 followed by 2 b6 only wins when Black's rook is on g4, because Black's king blocks the immediate return to the first rank. However, in each of these cases White's rook must be on the right square, or else Black acquires an alternative defence.

Finally, suppose Black's king is on g6. In the cases with B♖e4 and B♖g4, White needs the move ♖f5 after 1 b5 ♖b4; therefore these positions are no longer wins. However, the analysis with B♖d4 did not involve the move ♖f5, so this win remains.

Next we examine a few positions with White's rook in front of the pawn. In some cases this is just a matter of counting, but often the situation is more complex because Black cuts off White's king and White must use his own rook to lift the barrier.



265 +/=

*Original*

**(265):** Black to play draws easily by 1...♔g6, marching his king to the queenside, so we take White to play. 1 ♔f3! (not 1 ♔f2? ♔g6 2 ♔e3 ♔f6 3 ♔d4 ♔e6 4 ♔c5 ♔d7! followed by ...♔c7; 1...♖b3 is also a good reply) ♖e1 (now 1...♔g6 loses after 2 ♔e4! ♔f6 3 ♔d5! ♔e7 4 ♔c6 ♖d1 5 b5, so

Black must try to hold up the king's march to the queenside) and now:

1) **2 b5?** ♔g7! 3 b6 (now Black must try to cut off White's king, but which is the correct method?) with a branch:

1a) **3...♖e6?** 4 ♔f4! and Black cannot play 4...♔f7 due to 5 b7, so when White's king reaches f5 it will dislodge Black's rook. Therefore, cutting off White's king along a file doesn't work.

1b) **3...♖b1?** 4 ♔e4! ♖b5 (4...♔f7 5 ♔d5! is similar) 5 ♔d4 ♔f7 6 ♔c4! ♖b1 7 ♔c5 ♔e7 8 ♔c6! and White reaches b7.

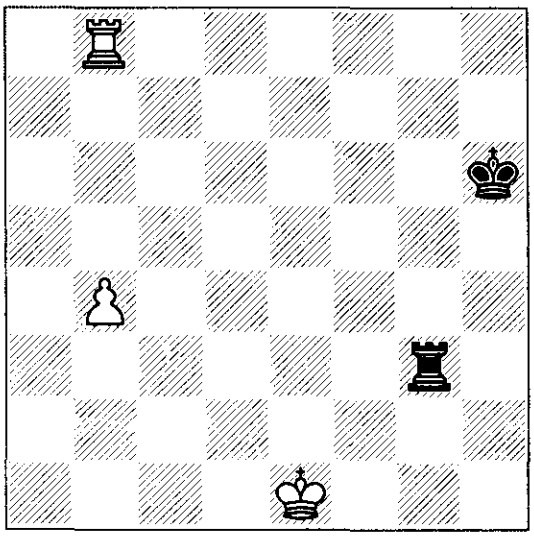
1c) **3...♖e5!** (cutting off along a rank is correct, but the right route to b5 is via e5, because Black gains a vital tempo this way) 4 ♔f4 ♖b5! 5 ♔e4 ♔f7 6 ♔d4 ♔e7 7 ♔c4 ♖b1 8 ♔c5 ♔d7! 9 ♖h8 ♖b2 and White cannot make progress.

2) **2 ♖g8!** (the immediate pawn advance doesn't work, so White must manoeuvre his rook to the e-file to lift Black's barrier; the route via g8 is correct because it also confines Black's king) with the following lines:

2a) **2...♖e5** 3 ♖g4! ♔h5 4 ♖e4! ♖b5 (4...♖d5 5 ♔e3 ♔g5 6 ♖d4! followed by ♔d3-c4 is similar) 5 ♔e3 ♔g5 6 ♔d3! ♔f5 7 ♖h4! ♔e6 (7...♔g5 8 ♖d4 followed by ♔c4) 8 ♔c4! ♖b8 (8...♖g5 9 ♖d4! followed by b5) 9 ♔c5 ♖c8+ (9...♔d7 10 ♖h7+) 10 ♔b6 and the pawn moves forward.

2b) **2...♔h5** (Black prevents 3 ♖g4? because of 3...♖f1+!) 3 ♔f4! (the threat is 4 b5 ♖b1 5 ♖g5+ followed by ♖c5 and ♔e5) ♖b1 4 ♔f5 ♔h6 5 ♔f6 ♔h7 6 ♖g4 and White's king is free to move across to the queenside.

2c) **2...♖b1** 3 ♖g4! ♖b3+ (3...♔h5 4 ♖c4 ♖e1 5 ♖e4 ♖d1 6 ♔e3 ♔g5 7 ♖d4! ♖c1 8 ♔e4 ♔f6 9 ♔d5! ♔e7 10 ♖c4! ♖h1 11 ♔c6 ♔d8 12 ♔b6 ♖h6+ 13 ♔a5 with b5 next move) 4 ♔e2! ♔h5 5 ♖c4 ♔g6 6 ♔d2! ♔f6 7 ♔c2! ♖h3 8 ♖c3! ♖h4 (otherwise White plays ♖e3, with a three-file cut-off) 9 ♔b3! ♔e6 10 ♔a4 ♖h8 (10...♔d7 11 ♔a5 followed by b5) 11 b5 ♖a8+ 12 ♔b4! ♔d7 13 b6 ♖c8 14 ♖c5! and wins.



266 +/=

*Original*

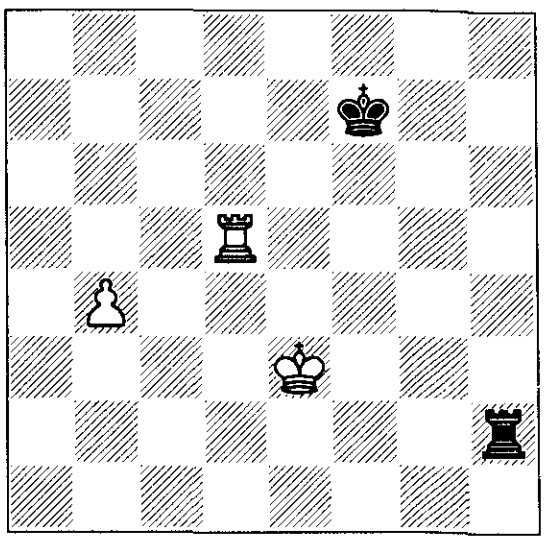
**(266):** This diagram is a counterpart to the previous one. Now Black tries to cut off White's king along a rank, and once again White must use his rook to make progress. Black to play can draw by 1...♔g7 2 ♔d2 ♔f7 3 ♖d8 ♔e7 because after 4 ♖d3 he can exchange rooks. We therefore take White to play: 1 ♔d2! (1 b5 ♔g7 2 b6 ♖b3 3 ♔d2 ♔f7 4 ♔c2 ♖b5 5 ♔c3 ♔e7 6 ♔c4 ♖b1 is one tempo too slow)

♔g7 2 ♖d8! (2 ♖e8? is bad because after 2...♔f7 3 ♖e3 Black can swap rooks, while 2 ♖c8? ♔f7 3 ♖c3 ♖g4 is bad because White cannot play ♔c3) ♔f7 (2...♖b3 3 ♖d4! ♔f7 4 ♔c2! ♖g3 5 ♖d3! is even better for White than the main line because his king is on c2 instead of d2) 3 ♖d3! ♖g8 (3...♖g4 4 ♔c3! ♔e7 5 b5 ♖h4 6 ♔b3 ♖g4 7 ♔a3 threatening b6 wins – see diagram 216) 4 ♔c3! (not the tempting 4 ♖e3? ♖e8! drawing, but in the note to Black's second move White's king is on c2 and this defence doesn't work) with two possibilities:

1) **4...♔e7** 5 ♔b3 (not 5 b5? ♖d8! drawing) ♖b8 6 ♖d4! winning as in diagram 242.

2) **4...♔e6** 5 b5! (in this case 5 ♔b3 doesn't work after 5...♖b8! with a draw as in diagram 241) ♔e7 6 ♔b4 and Black is too late to oppose rooks.

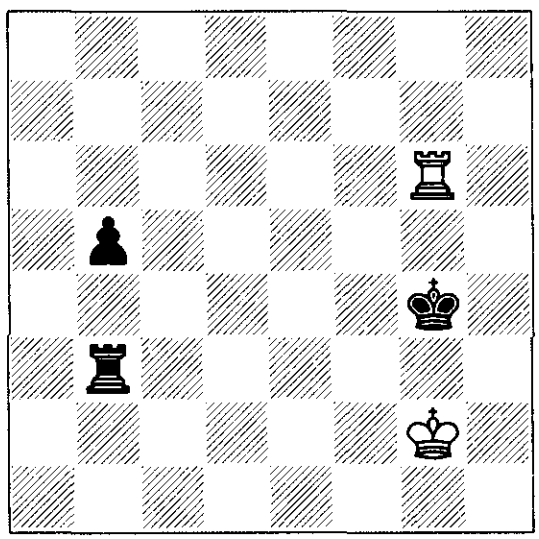
Now we look at a few positions in which White defends the pawn from the side.



267 +/=

*Original*

**(267):** Black to play can draw by 1...♔e6. With White to play the obvious moves don't work, for example 1 ♔d4? (1 b5? ♔e6 and ...♖b2 draws easily) ♔e6! (1...♖c2? 2 ♖e5 ♔f6 3 ♖e1 followed by b5) is very awkward for White because he cannot maintain his rook on the d-file. However White can win by 1 ♔d3! ♔e6 (1...♖h4 2 ♖d4 is even worse) 2 ♖d4 ♔e5 (2...♖h8 3 ♔c4! wins after 3...♖c8+ 4 ♔b5 ♔e5 5 ♖h4 ♔d6 6 ♖h6+ ♔d7 7 ♖h7+ ♔d6 8 ♔a6 or 3...♔e5 4 ♖d5+ ♔e6 5 b5 ♖c8+ 6 ♖c5! ♖b8 7 ♔b4) 3 ♖d8 ♖h4 (or else ♔c4) 4 ♔c3! ♔e6 5 b5 ♔e7 6 ♖d3 ♖g4 7 ♔b3 followed by ♔a3 winning as in diagram 216.



268 /+

**Blees – Berg**

*Dieren Open, 1987*

**(268):** Black played 1...♔f5! (gaining an important tempo; after 1...♔f4? 2 ♔f2 White draws) 2 ♖d6 (the best defence, creating a barrier on the d-file) and now:

1) **2...♔e5?** (the game continuation) with the possibilities:

1a) **3 ♖d1?** ♔e4 (not 3...b4? 4 ♔f2! ♖h3 5 ♔e2) 4 ♔f2 (4 ♖d2 b4 5 ♔f2 ♖a3 wins after 6 ♖b2 b3! or 6 ♔e2 b3) ♖b2+! 5 ♔e1 ♔e3 6 ♖a1 b4 7 ♔d1 (no – White isn't allowed to castle) ♔d3 8 ♔c1 ♔c3 9 ♖a8 ♖h2 10 ♖c8+ ♔b3! and wins as in diagram 197.

1b) **3 ♖d2?** b4! (3...♔e4? 4 ♔f2! b4 5 ♖d8 ♖d3 6 ♖b8! ♖d4 7 ♔e2! ♔d5 8 ♔e3 draws) 4 ♖d8 (or 4 ♔f2 ♖h3! 5 ♖d8 b3! 6 ♖b8 ♔d4! 7 ♔e2 ♔c3 reaching the Lucena position) ♖b1! 5 ♔f3 b3! 6 ♖b8 ♔d4! 7 ♔e2 ♔c3! and Black supports the pawn.

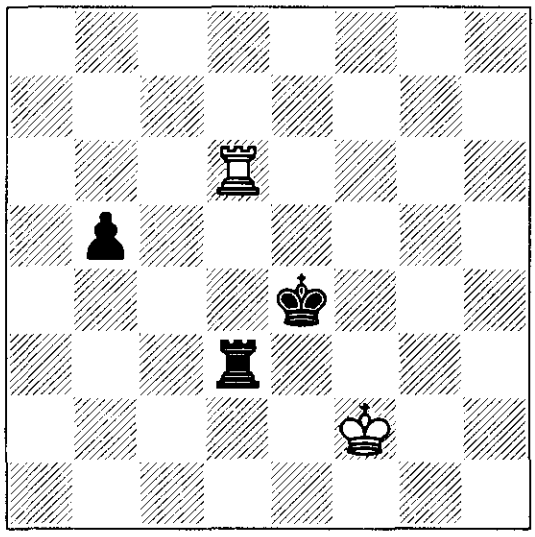
1c) **3 ♖d7?** ♖b4! (intending ...♖d4; 3...b4? 4 ♔f2 is too slow) 4 ♔f2 (4 ♔f3 is the same) ♖d4! 5 ♖h7 (5 ♖c7 ♔d5! 6 ♔e2/e3 ♖c4! 7 ♖h7 ♔c5 8 ♔d3 ♔b4! 9 ♖h1 ♖c3+ 10 ♔d2 ♔c4 wins – see diagram 235 for more details; 5 ♖b7 ♖d5! 6 ♔e3 ♔d6! 7 ♔e4 ♔c6! 8 ♖b8 ♖d7 9 ♖c8+ ♔b6! forces the advance of the pawn) ♔d6 transposes to diagram 267.

1d) **3 ♖d8!** (in the game White found the only move to draw) and Black has two ways of transferring his rook to the d-file:

1d1) **3...♔e4** 4 ♔f2! (4 ♔f1? ♔e3 wins) ♖d3 5 ♖b8! (5 ♖c8? ♔d4! 6 ♔e2 ♖c3! followed by ...♔c4 wins) ♖d5 6 ♔e2! (6 ♔e1? ♔d3! 7 ♔d1 ♔c3+ 8 ♔c1 ♖h5 9 ♔b1 ♔b3! wins – see diagram 234) ♔d4 7 ♔d2! and White's king makes it across to the queenside.

1d2) **3...♖b4** 4 ♔f3 ♖d4 5 ♖b8 (5 ♖h8 also draws, because if Black plays 5...♔d6, as in line 1c, then after 6 ♔e3! ♖d5 7 ♖d8+ White can exchange rooks) ♖d5 6 ♔e3 and 6...♔d6 (as in 1c) again fails because White can exchange rooks. The check on d8 explains why 3 ♖d8! draws but 3 ♖d7? loses. The game actually concluded 6...♖c5 7 ♔d3 ♔d6 8 ♔d4 ½-½.

2) **2...♔e4!** (the missed win; Black reaches the same type of position as in line 1d1 above, but with White's rook badly placed on d6) 3 ♔f2 ♖d3! *(D)* and now:



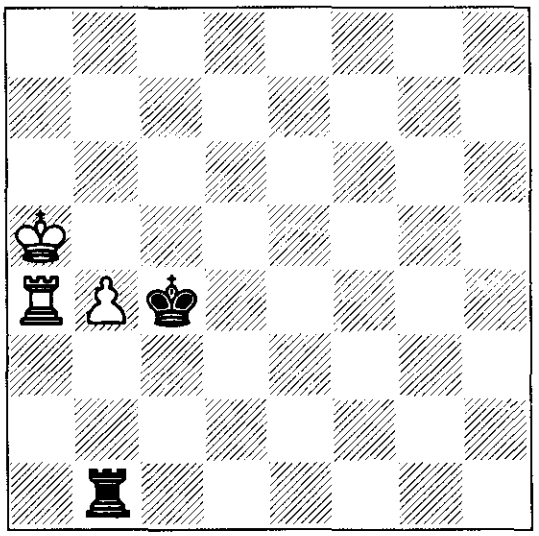
268a –/+

2a) **4 ♖h6** ♔d4 5 ♔e2 ♖c3! 6 ♖h4+ (6 ♔d2 b4! 7 ♖h4+ ♔c5! 8 ♖g4 ♔b5! followed by ...♔a4) ♔c5! 7 ♔d2 b4!, again followed by ...♔b5-a4.

2b) **4 ♖b6** ♖d5! 5 ♔e2 ♔d4! and now we see why the rook is worse on the sixth rank than the eighth. White cannot put his king on the d-file because ...♔c5+ wins the rook, so he has nothing better than 6 ♖c6 ♖c5! 7 ♖h6 ♔c3 8 ♔d1 ♔b3 9 ♖h3+ ♔a4, followed by ...b4.

Readers will have been wondering where the reciprocal zugzwangs have got to. The answer is that I have been

saving them up for the end of the section. We start with a simple case.



269 =/–

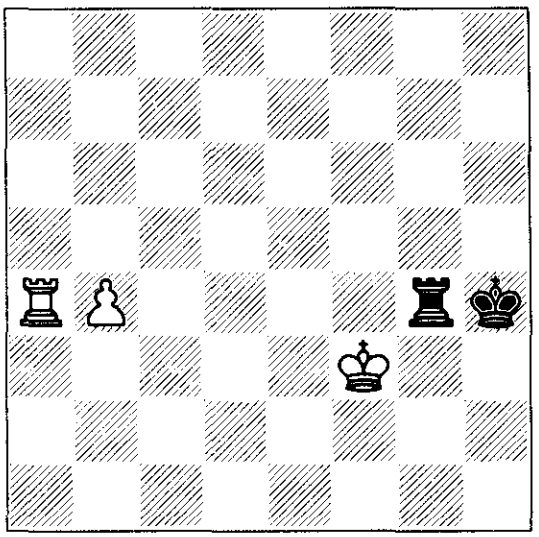
*Original*

**(269):** White to play loses his pawn immediately, so we take Black to play. After 1...♖b2 (1...♔d5 2 ♔b6 ♖h1 3 b5 ♖h6+ 4 ♔a5! ♖h8 5 ♖g4 ♔c5 6 ♖g5+ ♔d6 7 ♔b6 wins comfortably) 2 ♖a1! ♔d5 3 b5 ♔d6 4 ♖c1 ♖a2+ 5 ♔b6 ♖b2 6 ♔a6 we quickly arrive at the Lucena position.

There are four other reciprocal zugzwang positions with ♖+♙b4 v ♖, but as they are all closely related we only take the time to analyse one in depth. Readers should also refer to diagram 227, which belongs to the same family of positions.

**(270):** Firstly, suppose Black is to play:

1) **1...♔g5** 2 ♖a5+! ♔h4 3 ♖b5 ♖c4 (after 3...♖g1 4 ♖f5 White advances his pawn while keeping Black's king cut off) 4 ♔e3 ♔g4 5 ♔d3 ♖f4 6 ♖b8 and Black cannot play ...♔f5, so White wins easily.



270 =/–

*Original*

2) **1...♖g1** (1...♖g3+ is answered the same way, but if the rook moves towards g8 White wins by 2 b5+, when 2...♔g5 is impossible, followed by 3 ♖b4) 2 ♔e4 ♔g5 (checking from the side doesn't help because the king can hide on a5) 3 ♔d5 ♖g4 (3...♔f6 4 b5) 4 ♔c5 ♔f6 5 ♖a7 with a simple win.

3) **1...♖c4** (now White will gain a tempo when he moves his king to the queenside) 2 ♔e3 ♔g5 3 ♔d3! ♖h4 (3...♖c1 4 ♖a2 ♔f6 5 ♖e2 wins) 4 ♔c3! ♔f6 (4...♔f5 5 ♖a6 is worse) 5 ♖a1 (not 5 ♖a8? ♔e7! drawing) and after 5...♔e7 6 ♖d1! ♖h8 7 ♔b3 or 5...♔e6 6 ♖d1! ♖h8 7 b5! White wins as after White's fourth move in diagram 266.

4) **1...♔h3** 2 ♔e3 ♔h4 (there is nothing better) 3 ♔d3 ♔g5 4 ♔c3! transposes to line 3.

With White to play, the only reasonable plan is to move the king to c3, but Black is a tempo up over line 3 and this allows him to draw: 1 ♔e3 ♔g5! 2 ♔d3 ♔f6 3 ♔c3 ♔e7 4 ♖a5 ♔d7 5

♖c5 ♖g8 6 ♔c4 ♖c8 followed by the exchange of rooks.

The other three reciprocal zugzwang positions are obtained by shifting the kingside pieces. The first is W♔e3, ♖a4, ♙b4 v B♔g4, ♖f4, which has variations essentially identical to those above. The other two positions are W♔e1, ♖a4, ♙b4 v B♔g2, ♖f2 and W♔d1, ♖a4, ♙b4 v B♔f2, ♖e2. These are very similar to diagram 227 and readers should refer back for details.

There are a total of seven positions of reciprocal zugzwang in the ending of ♖+♙b4 v ♖. These may be found as diagrams 238, 239, 269 and 270 (plus three more in the notes).

**Practical tips:** There are several positions of great practical importance in this section. Diagram 234 arises frequently, and it is useful to understand the positions in which Black's king is cut off along a file. The most important ideas may be found in diagrams 240, 241, 242 and 244. Diagrams 257 and 259 are also helpful, because they provide target positions for White to aim for.

## 2.5: Pawn on the third rank

For some curious reason, this ending appears to arise frequently in practice. Unfortunately for the over-the-board player, it is also one of the most complex. Once again we attempt a rough division:

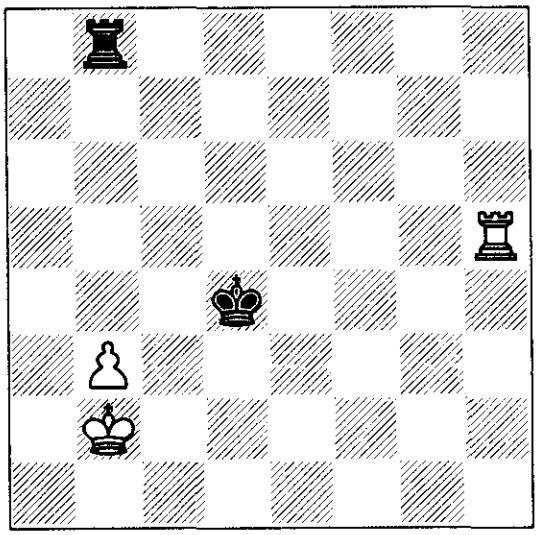
2.5.1: Black's king is cut off along a rank 161
2.5.2: Black's king is cut off along a file 166
2.5.3: As 2.5.2, but with White's king cut off along a rank 171
2.5.4: Other situations 174

### 2.5.1: Black's king is cut off along a rank

The first task is to deal with the basic positions. When White's rook is operating on the fifth rank the results correspond to those from section 2.4, namely Black draws if he can prevent ♔a3, but otherwise White wins.

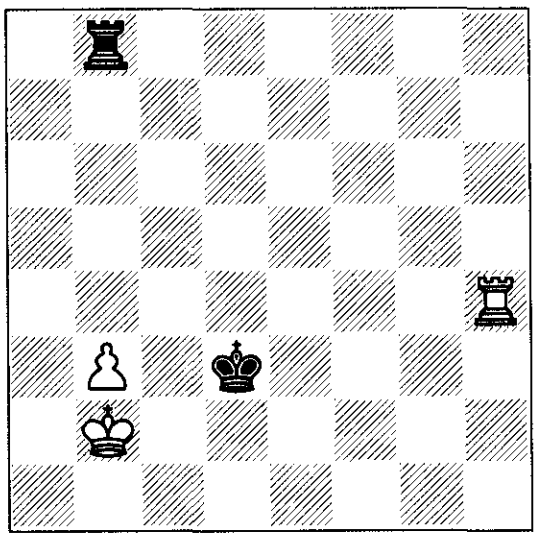
(**271**): White to play wins by 1 ♖a5 ♖h8 (there is nothing better) 2 ♔a3 ♖h1 (2...♖g8 3 b4 ♖g1 4 ♖c5 leads to diagram 259) 3 ♔a4 ♖a1+ (otherwise diagram 259 is unavoidable) 4 ♔b5 ♖b1 5 b4 ♔c3 6 ♖a3+! ♔d4 7 ♖h3 ♔d5 8 ♖h6 ♖b2 9 ♔a5 and so on. Black to play draws by 1...♖a8! (not 1...♖c8? 2 ♔a3! ♖a8+ 3 ♔b4! ♔d3 4 ♖a5 ♖b8+ 5 ♔a4 ♔c3 6 ♖c5+! ♔d4 7 b4 ♖a8+ 8 ♔b3 and diagram 259 appears again, but not 2 ♖a5? ♖c5! drawing) 2 ♖g5 ♖a7 and it is impossible for White to make progress.

When the rook is on the fourth rank the results again echo section 2.4, i.e. White always wins.



271 +/=

*Grigoriev, 1937*

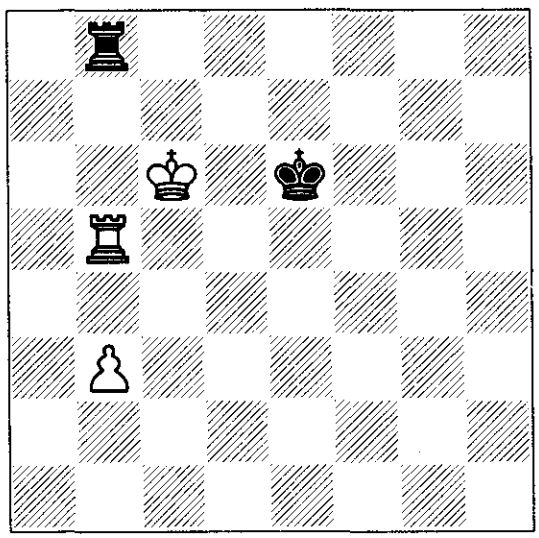


272 +/–

*ECE, 1985*

**(272):** We take Black to move. 1...♖c8 (the threat was 2 b4 followed by ♔b3) 2 b4 ♖c4 3 ♖h3+! ♔d4 4 ♔b3! ♖c1 (or 4...♖c8 5 ♖h5 with diagram 259) 5 ♖h5 ♖b1+ 6 ♔a4 ♔c4 7 ♖c5+ ♔d4 8 ♔b5 ♖h1 9 ♖g5 ♖h8 10 ♔c6 and wins.

Readers will have noted that there is no separate section for the case of the white king in front of the pawn. The reason is that White's winning chances are generally based on the idea of cutting off Black's king along a rank, so it is impossible to clearly distinguish the two cases. However, we do make time for a brief digression to deal with positions with the white king in front of the pawn. If Black's king is also in front of the pawn, White can only win if he can immediately transpose into diagram 234. Thus we need only examine the case in which Black's king is off to the side. White's situation is obviously less favourable than in section 2.4.1, but nevertheless there are still good winning chances.



273 /–

*Chéron, 1944*

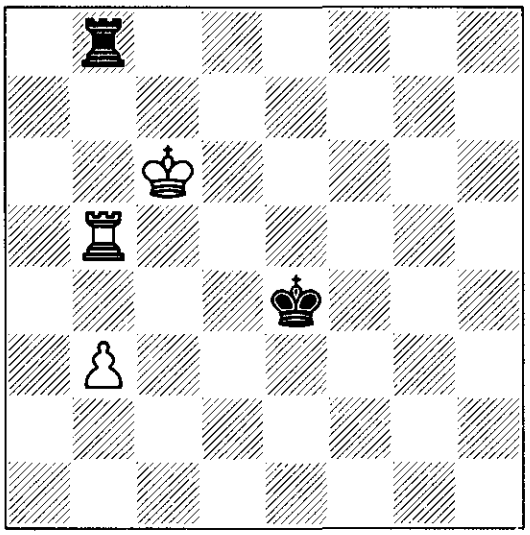
**(273):** In such positions Black's best hope is to tie White down to the defence of his pawn, but in this case it is insufficient: 1...♖c8+ (after 1...♖h8 2 ♖b7 Black has no way to prevent the white pawn's advance) 2 ♔b7 and now:

1) **2...♔d7** 3 ♖d5+ ♔e6 4 ♖d4 ♔e5 5 ♖h4 ♖g8 6 b4 ♖g7+ 7 ♔c6 ♖g6+ 8 ♔c5 ♔e6 9 ♖h7 ♖g1 10 b5

and with Black's king cut off along a rank his situation is hopeless.

2) **2...♖h8** 3 b4 ♖h4 (3...♔d6 4 ♖g5) 4 ♖b6+ ♔d5 5 ♔a6! ♖c4 (5...♔c4 6 b5 ♖h5 7 ♖g6 wins) 6 ♔a5 ♖c8 7 b5 ♔c5 8 ♖a6 ♖c7 9 ♖a8 and White is winning.

3) **2...♖c3** 3 b4 ♖c4 (3...♔d6 4 ♖h5) 4 ♖b6+ ♔d5 (4...♔d7 5 b5 ♖b4 6 ♔a7 ♔c7 7 ♖b7+ ♔d6 8 ♖b8 followed by b6) 5 ♔a6 ♖h4 6 ♔a5 (6 b5? ♖a4+! 7 ♔b7 ♔c5 draws) ♖h8 7 b5 winning as in line 2.



274 /–

*Chéron, 1944*

**(274):** Although Black has better chances of attacking White's pawn with his king, the position is still lost. 1...♖c8+ (1...♖h8 2 b4 ♖h6+ 3 ♔b7 ♖h7+ 4 ♔a6 ♔d4 5 ♖g5 wins) 2 ♔d7 (this is the simplest, although 2 ♔b7 also wins) ♖h8 (2...♖c3 3 b4 ♔d4 4 ♖g5 followed by b5) 3 b4! (White will meet ...♔d4-c4 by ♖g5 and b5) ♖h7+ 4 ♔c6 ♖h6+ 5 ♔b7 ♖h7+ 6 ♔a6 ♔d4 7 ♖g5 wins.

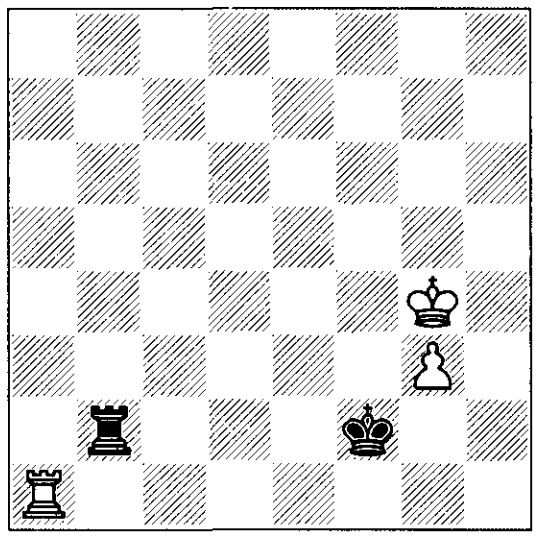
However, if White's rook starts on b6 then Black can draw by 1...♖c8+ and now:

1) **2 ♔b5** ♔d4 3 b4 (3 ♔b4 ♔d3! 4 ♖b5 ♔c2! draws) ♔c3! 4 ♔a6 ♔c4 and White cannot free himself.

2) **2 ♔b7** ♖h8 (2...♖c3? 3 ♔a6! ♔d4 4 ♔a5 ♖c5+ 5 ♔a4 ♖c8 6 ♖a6 followed by b4 wins) 3 b4 ♔d5! (not 3...♔d4? 4 ♖c6! winning) 4 ♔a6 ♔c4! drawing.

3) **2 ♔d7** ♖c3 3 b4 ♔d5 4 b5 ♖b3! followed by ...♔c5 winning the pawn.

This example is instructive because it shows how Black can sometimes draw by attacking the pawn and tying White down.

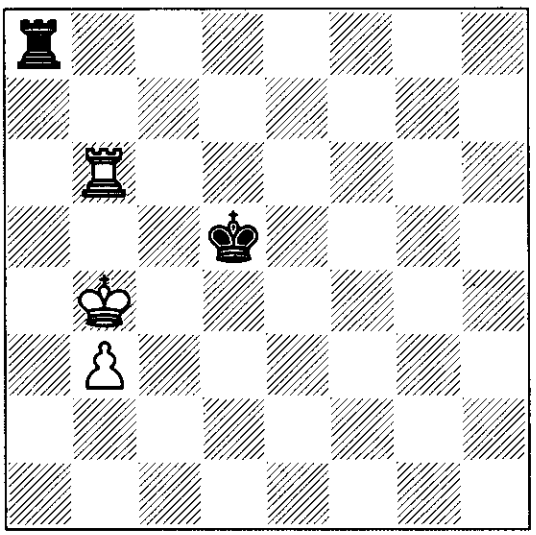


275 +/=

*Fine, 1941*

**(275):** This position represents a marginal case. Black to play can draw by 1...♔g2 2 ♖a4 ♖b8! (not, however, 2...♖b7? 3 ♖a2+! ♔g1 4 ♔h5 ♖h7+ 5 ♔g6! ♖h8 6 g4 with an easy win; note also that 2...♖c2 loses – see the position with White to play) 3 ♖a2+ ♔g1 4 ♔f5 ♖f8+! 5 ♔e5 ♖g8 6 ♖a3 ♔g2 7 ♔f4 ♖f8+.

However, White to play can win by 1 ♖a4 (threat ♔f4) ♖b8 (or 1...♔g2 2 ♔h4! ♖b8 3 g4! ♔f3 4 ♖a5 ♖h8+ 5 ♖h5! ♖g8 6 ♖f5+! ♔e4 7 ♔g3 with diagram 259) 2 ♔h3! ♖h8+ (2...♖g8 3 ♖f4+ ♔e3 4 ♖f5 ♖h8+ 5 ♔g4 ♔e4 6 ♖h5 ♖g8+ 7 ♔h4 ♔f3 8 ♖f5+! ♔e4 9 g4 reaching diagram 259 again) 3 ♖h4! ♖g8 (after 3...♖a8 4 ♖h6 White wins more easily) 4 ♖f4+ ♔e3 5 ♖f5 as in the note to Black's second move. The situation is very similar to that in diagram 274.



276 =/–

*Original*

**(276):** This reciprocal zugzwang is very important. First of all suppose Black is to play. We have:

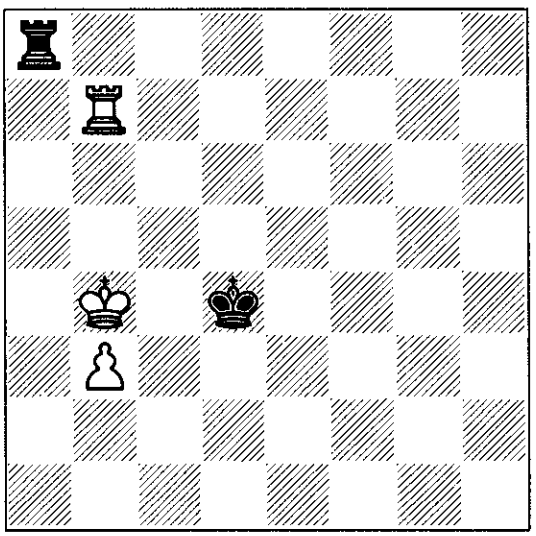
1) **1...♔d4** 2 ♖b5! and Black can do nothing to prevent the threat of 3 ♖a5 ♖b8+ 4 ♔a4 winning as in diagram 275.

2) **1...♔e4/e5** 2 ♔c5 ♖a5+ 3 ♔c4 and the pawn advances.

3) **1...♖a7** 2 ♔b5! ♔d4 3 b4 ♔c3 (3...♖a8 4 ♖a6 ♖b8+ 5 ♔a5 wins) 4 ♖c6+ ♔b3 5 ♔b6 (exploiting the rook's position on a7) followed by b5 and wins.

4) **1...♖a1** 2 ♔b5 ♔d4 3 b4 ♔c3 4 ♖c6+ ♔b3 5 ♖h6 followed by ♖h3+ and the pawn cannot be stopped.

With White to play 1 ♔b5 is the only reasonable move, but then 1...♔d4! 2 b4 (2 ♖c6 ♖b8+! 3 ♔a4 ♖a8+ 4 ♔b4 ♖b8+! 5 ♔a3 ♖a8+ 6 ♔b2 ♔d5 is an easy draw) ♔c3! 3 ♖c6+ (3 ♖b7 ♔b3) ♔b3! 4 ♔c5 ♖h8 5 b5 ♖h5+! 6 ♔b6 ♔b4! wins the pawn.



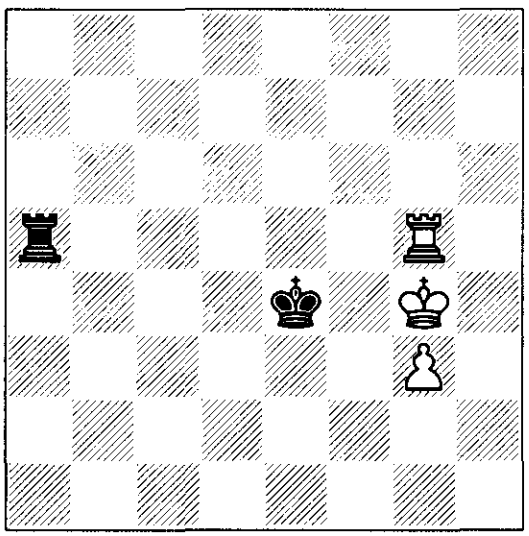
277 +/=

*Grigoriev, 1937*

**(277):** White to play wins by 1 ♖b5 transposing to line 1 of the previous diagram. However, Black to play can use the extra tempo to mount an attack on White's pawn: 1...♔d3! (1...♔d5? 2 ♖b6! is diagram 276) 2 ♔c5 (2 ♖c7 ♖b8+! 3 ♔a3 ♖a8+ 4 ♔b2 ♔d4! draws by preventing the fourth rank cut-off of diagram 272, while 2 ♖d7+ ♔c2! 3 ♖c7+ ♔b2! 4 ♔c4 ♖h8 5 b4 ♖h4+! 6 ♔c5 ♔b3 7 b5 ♖h5+! 8 ♔c6 ♔b4 9 b6 ♖h6+! 10 ♔b7 ♔b5! rounds up the pawn) ♔c3 3 b4 ♖c8+! 4 ♔b5

♔b3 and Black draws as in diagram 236.

That's enough theory; now for a couple of practical examples.

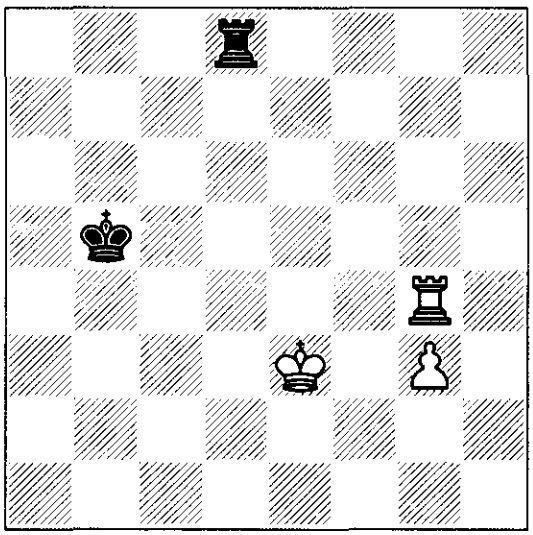


278 /–

**Sehner – B.Schneider**

*Bundesliga 1985/6*

**(278):** If Black tries to defend by 1...♖a1 (1...♖a3 2 ♖b5 followed by ♔h4 is very similar), then 2 ♖b5 (threat ♔g5 and g4) ♖g1 3 ♔h4 ♖h1+ 4 ♔g5 ♖h8 5 g4 ♖g8+ 6 ♔h4 ♖h8+ 7 ♔g3 leads to diagram 259. Therefore, Black preferred 1...♖a8, when the game continued 2 ♖g7? (we know from the previous positions that White has an elementary win by 2 ♔h4 ♖h8+ 3 ♖h5) ♔e5 (2...♔e3 also draws as in diagram 277) 3 ♔g5 ♔e6? (Black does not seem to be aware that he should be trying to attack the g-pawn with his king; the analysis of diagram 276 with White to move shows that the drawing line is 3...♔e4! 4 g4 ♔f3! 5 ♖f7+ ♔g3!) 4 g4! (suddenly Black's position is hopeless) ♖a4 5 ♖b7 ♖c4 (or 5...♖a8 6 ♔h6) 6 ♔h5 ♖c8 7 g5 ♖h8+ 8 ♔g6! (not 8 ♔g4? ♖h1! drawing) ♖g8+ 9 ♔h6 1-0.



279 /–

**Salov – Malaniuk**

*USSR Ch (Moscow), 1988*

**(279):** Black must try to bring his king closer, but whichever first move he chooses results in his king being cut off, either along a rank or along a file: 1...♔c5 (1...♔c6 2 ♖c4+ ♔b5 3 ♖c1 cuts the black king off by four files which, as we shall see in section 2.5.2, is more than enough to win) 2 ♖g6 ♔d5 3 ♔f4! ♖f8+ 4 ♔g4! (not 4 ♔g5? ♔e4! 5 g4 ♔f3! with the usual drawing plan by Black) and now:

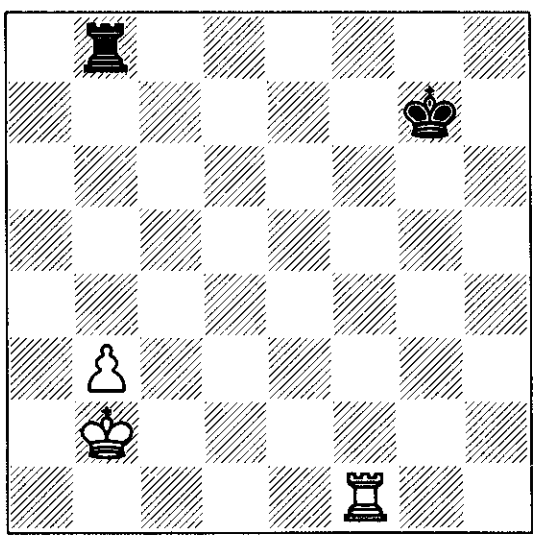
1) **4...♔e5** (threatening to draw by 5...♖h8! when we have the reciprocal zugzwang of diagram 276 with White to play) 5 ♔h5! (not 5 ♔g5? ♔e4!, nor 5 ♔h4? ♔f5!) ♖f1 (5...♖h8+ 6 ♖h6 followed by g4, or 5...♔e4 6 g4) 6 g4 ♖h1+ 7 ♔g5! ♖h8 8 ♖h6 ♖g8+ 9 ♔h5 wins.

2) **4...♔e4** (the game continuation) 5 ♖e6+ ♔d5 6 ♖h6 ♔e4 (6...♔e5 7 ♔h4 wins now that 7...♔f5 can be met

by 8 g4+!) 7 ♔h5 ♖f5+ 8 ♔h4 ♔f3 (Black cannot prevent g4) 9 g4 ♖f8 (or 9...♖f4 10 ♖g6 followed by ♔h5 and g5) 10 g5 ♖f4+ (10...♔e4 11 g6? ♔f5! draws, but almost any other reply wins for White, for example 11 ♔g4 or 11 ♔h5) 11 ♔h5 ♔g3 12 ♖a6 ♖h4+ 13 ♔g6 ♖b4 14 ♔h7 ♔g4 15 ♖a5 ♖b7+ 16 ♔h6 ♖b2 17 g6 ♖h2+ 18 ♔g7 ♔f4 19 ♔f7 1-0.

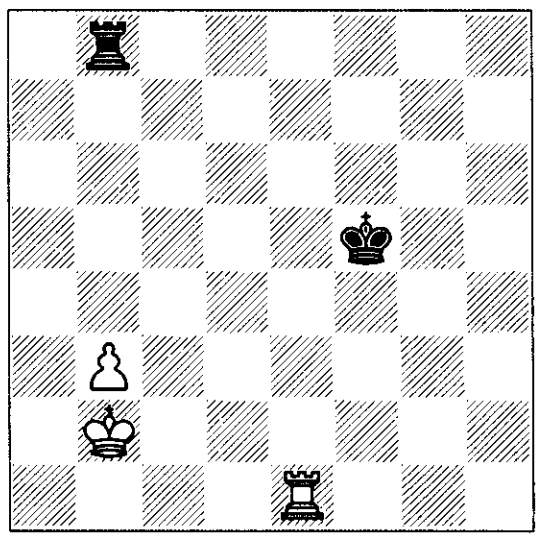
## 2.5.2: Black's king is cut off along a file

In this section we suppose that Black's king is cut off along a file, but White's king is not cut off from the pawn. Readers may recall that with the pawn on the fourth rank, a distance of three files is necessary to guarantee a win. Curiously enough, the same distance suffices for a pawn on the third rank. However, the winning process is significantly more complicated.



280 +/–

**(280):** The first step is to show how White wins if Black's king is cut off by four files. It doesn't matter who is to move or where Black's king is on the g-file, so we take Black to move. The winning process is relatively simple; White advances his king and switches his rook behind the pawn at the right moment: 1...♔g6 2 ♔c3 ♖c8+ 3 ♔d4 ♖d8+ 4 ♔c5 ♖c8+ 5 ♔d6 ♖b8 (5...♖d8+ 6 ♔c6 ♖c8+ 7 ♔b7 ♖c5 8 ♔b6 forces through b4) 6 ♖b1 ♔f7 (6...♖b4 7 ♔c5 is similar) 7 b4 ♔e8 8 ♔c7 (the flashy 8 b5 ♔d8 9 ♖d1 is quicker, but there is no need for fireworks) ♖b5 9 ♔c6 ♖b8 (9...♖e5 10 b5) 10 b5 ♔d8 11 b6 ♖c8+ and White can win with either 12 ♔b7 or 12 ♔d6.



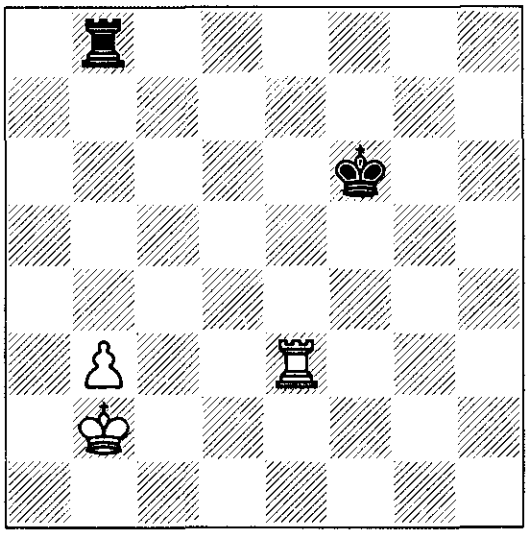
281 +/–

*Grigoriev, 1937*

**(281):** Next we consider the special case with Black's king on f5 and the white rook on e1 or e2 (with the rook on e3 a different method is necessary). The main line runs 1 ♔c3 ♖c8+ (if White ever plays b4, then he wins as in section 2.4.2) 2 ♔d4 ♖d8+ 3 ♔c5 ♖c8+ 4 ♔d5 (or ♔d6) ♖d8+ (4...♖b8 5 ♖b1 ♖b5+ 6 ♔c6 ♖b4 7 ♔c5 transposes to

the main line) 5 ♔c6 ♖b8 (5...♖c8+ 6 ♔b7 ♖c5 7 ♔b6 followed by b4) 6 ♖b1! ♖b4 7 ♔c5 ♖b8 (7...♖h4 8 b4 ♔e6 9 ♔c6 ♖c4+ 10 ♔b7 wins) 8 b4 ♔e6 9 ♔c6 and the pawn moves forward.

We defer the proof that White wins even with Black to move until after the next diagram.



282 +/–

*Grigoriev, 1937*

**(282):** White should aim for this key position. We first consider the case of White to move: 1 ♔c3 (as usual Black must prevent b4) ♖c8+ (after 1...♖a8 White can play 2 ♔d4 transposing to the main line, although there is a faster win by 2 ♖e4) 2 ♔d4 ♖d8+ 3 ♔c5 ♖c8+ 4 ♔d6 ♖b8 (4...♖d8+ 5 ♔c7 ♖d4 6 ♔c6 ♖h4 7 ♔b5 ♖h5+ 8 ♔a4 followed by b4) 5 ♖f3+ (this is why White should aim for a position with B♔f6; it gives him the chance to drive the king one file further away) ♔g6 6 ♔c5 ♖c8+ 7 ♔d4 ♖d8+ 8 ♔c3 ♖c8+ 9 ♔b2 ♖b8 10 ♖f1 and we have diagram 280.

The next step is to prove that this position is a win with Black to move. There are two possibilities:

1) **1...♔f7** 2 ♖e4 (threat b4 and ♔b3) ♔f6 3 ♔c3 (White advances his king; sooner or later Black will have to play ...♔f5, whereupon White transposes to diagram 281) ♖c8+ (3...♔f5 4 ♖e1 ♖c8+ 5 ♔d4 is an immediate transposition) 4 ♔d4 ♖b8 5 ♔c4 ♖c8+ 6 ♔d5 ♖d8+ 7 ♔c5 ♔f5 (7...♖c8+ 8 ♔d6 ♔f5 9 ♖c4 is worse) 8 ♖e1 reaching diagram 281.

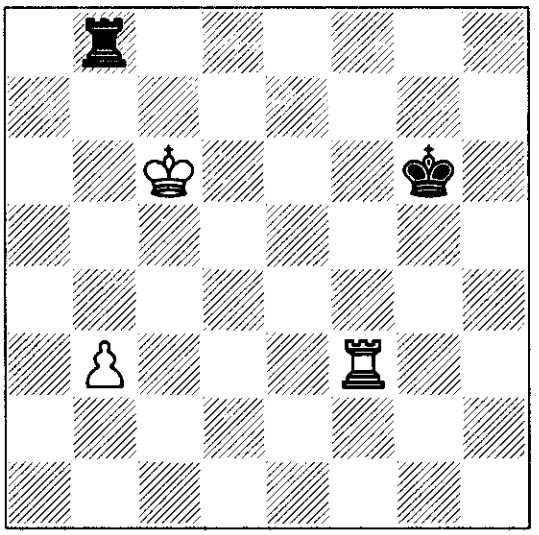
2) **1...♔f5** (the best defence; now White must put Black in zugzwang) 2 ♖e1 ♔f6 (or 2...♖d8 and now White must not play 3 b4? ♖d3! drawing; instead 3 ♔c3 ♖c8+ 4 ♔d4 transposes to diagram 281) 3 ♖e2 (Black is in zugzwang, but it is not a reciprocal zugzwang because White has the waiting move ♖e1) ♖d8 (3...♔f7 4 ♖e4 is line 1, 3...♔f5 4 ♔c3 is diagram 281 and 3...♖b7 4 ♖e3 either transposes to the main line after 4...♖b8 5 ♔c3 or wins after 4...♔f5 5 ♔c3, very much as in diagram 281) 4 ♖e3 ♖b8 (or else b4) 5 ♔c3 and wins as in the analysis with White to move.

We can now complete the analysis of diagram 281 by noting that when Black is to move the position is identical with that after White's second move in line 2 above.

The winning method for the general position with the rook on the e-file is now clear. Put your rook on e3 and look at the situation after Black's reply. If his king is on f7 play ♖e4; if it is on f6 play ♔c3 (eventually forcing the king to the g-file) and finally if it is on

f5 play ♖e1, meeting ...♔f6 by ♖e2 with zugzwang.

Now we look at a few positions in which White's king is not defending the pawn, so Black can try to draw by dislodging White's rook.

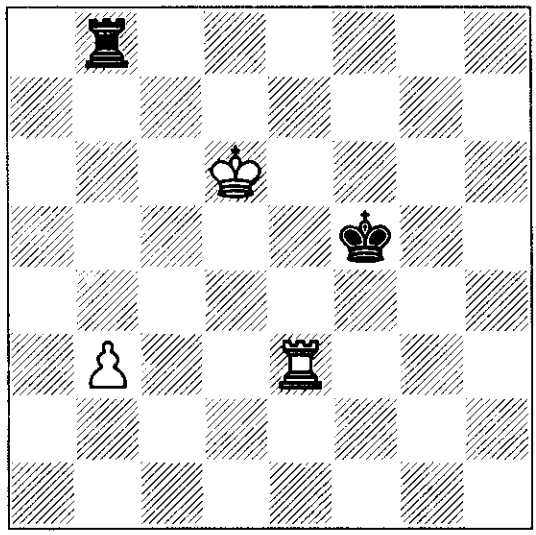


283 +/–

*Fila, 1932*
*Ceskoslovensky Sach*

(**283**): We take Black to move. His king is cut off by four files, so Black loses if White's king can return to support the pawn. Therefore he must try 1...♔g5, when the simplest win is 2 ♔c5 ♔g4 3 ♖d3 ♖c8+ (3...♔f4 4 b4 wins) 4 ♔b6 ♖b8+ (after 4...♔f5 5 ♖d7 ♔e6 6 ♖b7 the b-pawn can be advanced) 5 ♔c7 ♖b4 6 ♔c6 ♖b8 7 ♖d4+ ♔f5 8 b4 ♔e5 9 ♖h4 with an easy win.

(**284**): Grigoriev only considered this position with White to move, but it is much more interesting with Black to play. 1...♔f4 2 ♖h3! (2 ♖c3? ♔e4! 3 ♖h3 ♔d4! draws) ♔g4 (2...♔e4 is met by 3 ♔c7! ♖b5 4 ♔c6! ♖b8 5 b4 winning, and not 3 b4? ♔d4! with a

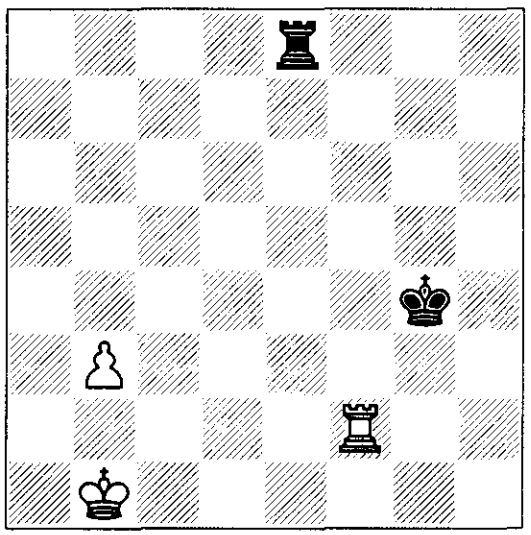


284 +/–

*Fine, 1941*

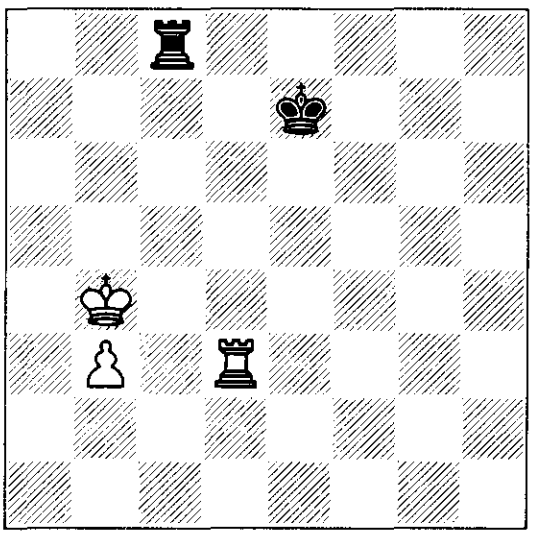
draw, while 2...♔f5 3 ♔c7 ♖b4 4 ♔c6 ♖b8 5 ♖h5+ ♔e6 6 ♖b5! wins as in diagram 273) 3 ♔c7 ♖b4 4 ♖c3! ♔f5 5 ♔c6 ♔e5 (5...♖b8 6 ♖c5+ and 7 ♖b5) 6 ♔c5! (6 ♖c5+? ♔d4! 7 ♖b5 ♔c3!) ♖b8 7 ♖e3+! ♔f4 (otherwise b4) 8 ♖h3! (an echo of 2 ♖h3!, but White has gained the tempo ♔c5) ♔g4 (8...♖c8+ 9 ♔d6 ♖b8 10 b4 wins) 9 ♖d3 ♖c8+ 10 ♔b5 ♖b8+ 11 ♔c6 ♔f4 12 ♖d4+! ♔e3 (12...♔e5 13 ♖d5+! ♔e6 14 ♖b5 is diagram 273 again) 13 ♖h4! (for the third time the h-file is the destination of White's rook; 13 ♖g4? ♔f3! 14 ♖h4 ♔g3! wins the pawn) ♖c8+ 14 ♔b7 followed by b4 wins.

(**285**): We consider Black to move. Once again Black's king is too far away, so he must play actively to prevent a simple win by ♔b2. The main line runs 1...♔g3 2 ♖c2 (2 ♖d2 also wins, but not 2 ♖f6? ♖e2! with a draw as in diagram 293, for example 3 ♖c6 ♔f4! 4 ♖c2 ♖e1+ 5 ♔b2 ♔e5! 6 ♖d2 ♖h1 7 ♔a3 ♖h8 8 b4 ♖b8 draws) ♔f4 (2...♖b8 3 ♔b2 ♔f4 loses after 4 ♖c5



285 +/–

*ECE, 1985*



286 +/=

or 4 ♖e2) 3 ♔b2! (again not 3 ♖c5? ♖e2! drawing, while 3 ♔a2? ♖a8+! 4 ♔b2 ♔e5! allows Black to avoid the e-file skewer with gain of tempo) and now White threatens b4, so Black must move his rook off the e-file to meet b4 by ...♔e5. But then White replies ♖e2 with a win as in diagram 281.

Surprisingly, it is sometimes possible for White to win even if Black's king is cut off by only two files. However, this does require a favourable initial position and an active white king.

(**286**): White to play wins by 1 ♔b5! (1 ♔a5? ♔e6! 2 b4 ♖a8+! 3 ♔b5 ♖b8+! 4 ♔c4 ♖c8+! 5 ♔b3 ♖b8! is a draw by diagram 241) and now:

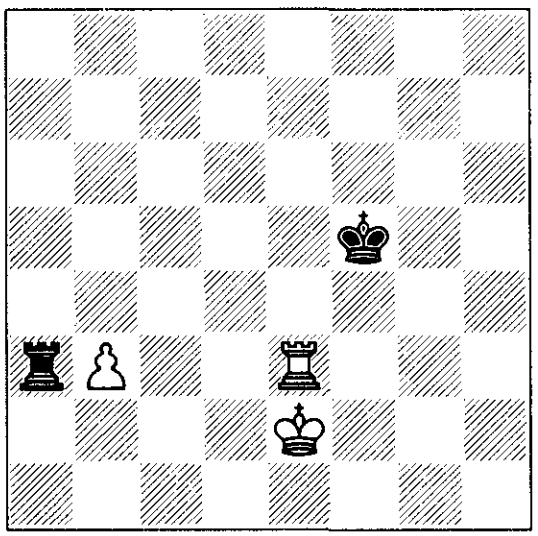
1) **1...♖b8+** (the threat is 2 b4, so Black must do something) 2 ♔c6 (threat 3 ♔c7 followed by ♖e3+, with a winning e-file cut-off) ♖c8+ 3 ♔b7 ♖c5 4 ♔a6 ♖c6+ 5 ♔b5 ♖c8 6 b4 ♖b8+ 7 ♔c4 ♖c8+ 8 ♔b3 ♖b8 9 ♖d4! and wins as in diagram 241 because Black has not had time to move his king to the drawing square e6.

2) **1...♔e6** 2 ♖h3 (not 2 b4? ♖b8+! leading to diagram 241 and a draw; it is astonishing that White has a better move than b4, but he can make use of his active king position to threaten to transfer his rook to b6 or b7) ♖b8+ (the threat was 3 ♖h6+ ♔d7 4 ♖h7+ ♔d6 5 ♖b7, followed by the advance of the pawn; 2...♖g8 allows the king to retreat to the first rank after ♖h6+ and ♖h7+, but then 3 ♔c6 wins) 3 ♔c5! (not 3 ♔c6? ♔e5! 4 ♔c5 ♖c8+! 5 ♔b5 ♔d4 6 b4 ♖b8+! 7 ♔a5 ♖a8+! 8 ♔b5 ♖b8+! 9 ♔a4 ♖a8+ 10 ♔b3 ♔d5 11 ♖h6 ♖a1 drawing) ♖c8+ (3...♔d7 4 ♖h7+! wins) 4 ♔b6 ♖b8+ (4...♔d5 5 ♖h5+! ♔d4 6 b4 ♖b8+ 7 ♔a5! ♖a8+ 8 ♔b5 ♖b8+ 9 ♔a4 ♔c4 10 ♖c5+! ♔d4 11 ♔b3 wins) 5 ♔c7! ♖b4 (5...♖b5 6 ♔c6 followed by ♖e3+) 6 ♔c6! ♖b8 (6...♔e7 7 ♖h7+ ♔d8 8 ♖b7 ♖h4 9 ♖b8+ ♔e7 10 b4 wins) 7 ♖e3+ ♔f5 8 ♔d6 winning as in diagram 284.

Black to play draws by 1...♔e6! (1...♖b8+? 2 ♔c5! ♖c8+ 3 ♔b6 ♔e6 4 ♖h3 wins as in line 2 above, but not 4 b4? ♖b8+! reaching diagram 241) 2

♔b5 ♔e5! (threatening 3...♖b8+ 4 ♔c6 ♔e4) 3 b4 ♖b8+! 4 ♔c4 ♖c8+! 5 ♔b3 ♖b8! with a draw as in diagram 241 (recall that e6 and e5 are the only safe squares for Black's king in this position).

The next position represents a curiosity.



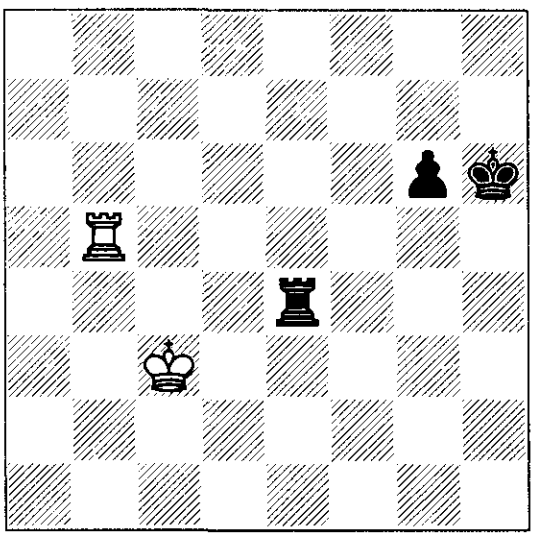
287 =/–

*Original*

**(287):** Reciprocal zugzwang again. Firstly suppose that Black is to move. If White can reach c3 with his king while maintaining the e-file cut-off then he will win. Therefore 1...♔f6 2 ♔d2 and 1...♖a8 2 ♔d2 ♖c8 3 ♖e1 ♔f6 (Black has no really constructive move) 4 ♔d3 (not 4 b4? ♖c4!, but now b4 is a threat) ♖b8 5 ♔c4 are winning for White. Black's only move to obstruct White's plan is 1...♔f4, but then 2 ♔d2! reaches a second position of reciprocal zugzwang. Any king move allows 3 ♔c3, 2...♖a8 3 ♖e1 is the e-file cut-off and 2...♖a2+ 3 ♔d3! ♖b2 (3...♖a3 4 ♔d4) 4 ♔d4! simply forces White's king to a better position.

White to play can make no progress, for example 1 ♔d2 ♔f4! and White is in zugzwang, or 1 ♔d1 ♖a2! 2 ♔c1 ♖h2 drawing.

We move on to some practical examples.



288 =/+

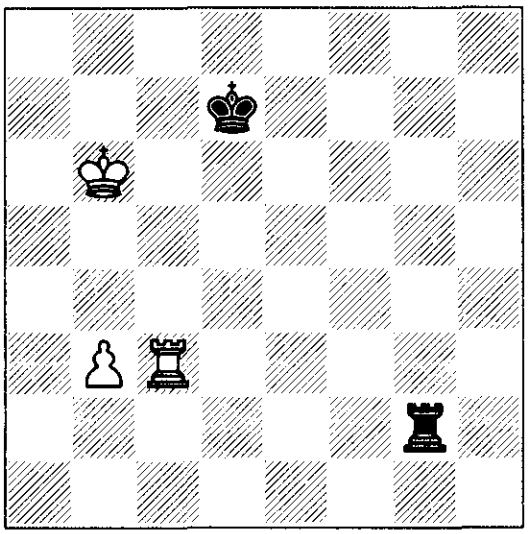
**Tal – I.Zaitsev**

*Riga, 1968*

**(288):** Black to play wins by 1...g5 2 ♔d3 ♖e8 followed by ...g4, so we assume that White is to move. The analysis runs:

1) **1 ♔d3?** (the move played in the game) ♖e1! (1...♖e8 2 ♖b1! draws as in line 2) 2 ♔d2 (after this White succeeds in bringing his rook to the first rank, but his king becomes misplaced) ♖e8 3 ♖b1 g5! 4 ♖g1 ♔h5! 5 ♖h1+ ♔g6! 6 ♖g1 ♖e5! and we know this is a win from diagram 241 (White needs his king on d3 to draw).

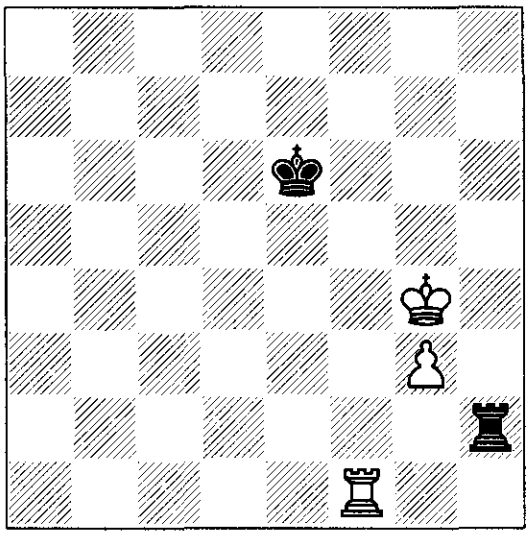
2) **1 ♖b1!** (now White occupies the first rank without misplacing his king) g5 2 ♔d3! (2 ♖h1+? ♖h4! 3 ♖g1 g4 4 ♔d3 ♔g5! 5 ♔e3 ♖h2! wins) ♖e8 3 ♖h1+ ♔g6 4 ♖g1! draws.



289 +/–

**Kruszynski – Filipowicz**
*Poland, 1977*

(**289**): We take Black to move. The game continued 1...♖b2 (1...♖g6+ 2 ♔b7! ♖g5 3 ♖c6 ♖b5+ 4 ♖b6! ♖c5 5 b4 ♖c7+ 6 ♔b8 ♖c8+ 7 ♔a7 ♔c7 8 ♖h6 wins for White, as does 1...♖g8 2 ♖c7+ ♔d6 3 b4) 2 ♔b5 ♖a2 3 b4 ♖a8 4 ♖c4 and White wins as in diagram 244.



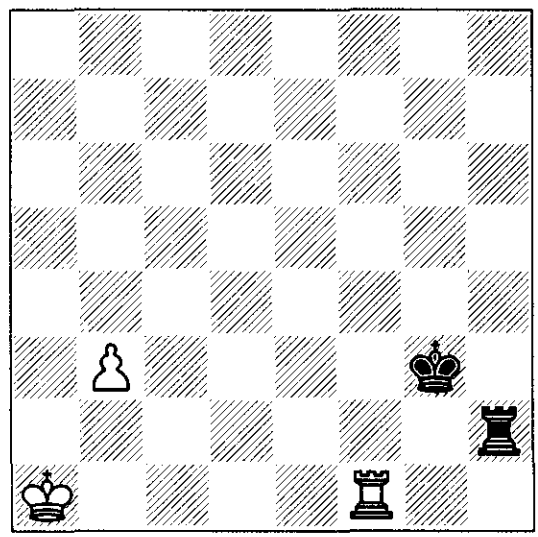
290 +/=

**Krasenkov – Sveshnikov**
*Norilsk, 1987*

(**290**): Black to play can draw by 1...♖h8, so we take White to play. The game continued 1 ♔g5! ♖h8 (this position is a draw if Black's king is on e7) 2 ♖f6+! (with the king on e6 White can block Black's rook checks with gain of time) ♔e7 3 g4! ♖g8+ 4 ♖g6! ♖a8 5 ♖g7+ ♔f8 6 ♔h6 ♖a6+ (or 6...♖a1 7 g5!) 7 ♔h7 ♖a4 8 g5 ♖h4+ 9 ♔g6! ♖g4 10 ♖f7+ ♔g8 11 ♖a7 (the win is as in diagram 213) ♔f8 12 ♖a8+ ♔e7 13 ♖g8 1-0.

### 2.5.3: Black's king is cut off along a file and White's king is cut off along a rank

Here we imagine a situation in which White's king is on the first rank and Black's rook occupies the second rank. As usual, we try to find out how far away Black's king must be in order for White to win. In general four files is not enough, but White can sometimes win with a favourable initial position.



291 =/=

*Chéron, 1944*

**(291):** We may as well take White to play:

1) **1 ♖f8** ♔g4 2 b4 (2 ♔b1 ♔g5 3 ♖c8 ♔f5 4 ♖c2 transposes to line 5) ♖d2 3 b5 (3 ♖a8 ♔f5 4 ♖a2 ♖d4 5 b5 ♔e6 draws easily) ♖d5 4 ♖b8 ♔f5! 5 b6 ♔e6 6 b7 ♖a5+!, to be followed by ...♖b5+ and ...♔d7.

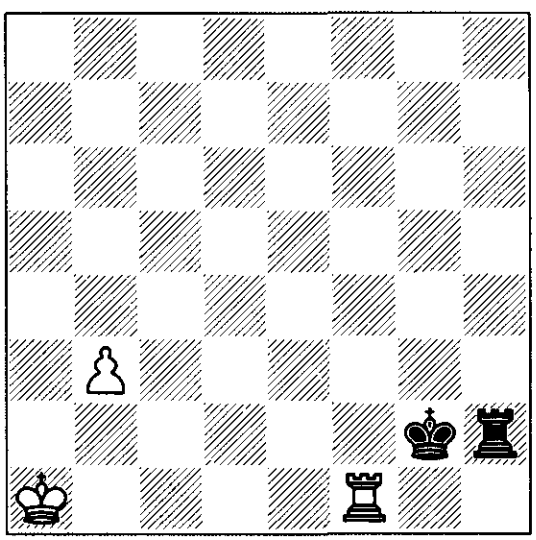
2) **1 b4** ♖h4 2 ♖b1 ♔f4! 3 ♔a2 (3 b5 ♔e5 4 b6 ♖a4+) ♔e5 4 ♔b3 ♔d6 5 ♖c1 ♖h8! 6 b5 ♔d7 followed by ...♖c8 draws.

3) **1 ♖f5** ♔g4 2 ♖a5 ♔f4! 3 ♖a2 ♖h8 4 ♖a5 ♖h2! draws.

4) **1 ♖b1** ♔f4 2 ♖b2 ♖h1+ 3 ♔a2 ♔e5 4 ♖d2 ♖h8 5 b4 ♖b8 draws.

5) **1 ♔b1** ♔g4 2 ♖c1 ♔f5 3 ♖c2 ♖h1+ (or 3...♖h3, but not 3...♖h8? 4 ♖e2! winning) 4 ♔b2 ♔e6 5 ♖d2 ♖h8 6 b4 ♖b8 7 ♔b3 ♔e5! draws.

In general the further Black's king is up the g-file, the more danger he is in. It follows that diagram 291 is still drawn if Black's king is on g4, g5, g6, g7 or g8. However White can win if Black's king is on g2.

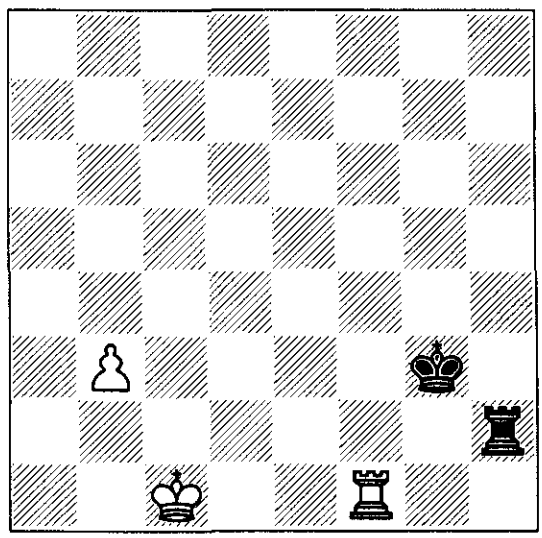


292 +/

*Original*

**(292):** 1 ♖f4! (White gains a vital tempo by keeping Black's king cut off along a rank; after 1 ♖f5? ♔g3! 2 ♖a5 ♔f4! Black draws as as in line 3 of the previous diagram) ♔g3 2 ♖a4! ♔f3 3 ♖a2! (with this curious manoeuvre White frees his king when, thanks to the position of Black's king on f3, White's rook can return to cut off the king along the fifth rank) ♖h1+ (after 3...♖h8 4 ♔b2 ♔e4 5 ♖a5! White wins as in the main line) 4 ♔b2! ♔e4 (if Black's king were on f4 then ...♔e5 would draw) 5 ♖a5! ♔d4 6 ♔a3 ♖a1+ 7 ♔b4! ♖h1 8 ♔a4 and wins as in diagram 271.

The situation is slightly better for White if his king is on c1. In this case White can win when Black's king is on g3.



293 +/=

*Original*

**(293):** If we move Black's rook to e2 then the result is the same, but with the rook on a2 the position is a draw, even with White to play. We consider all three cases.

**B♖h2:** White may play:

1) **1 ♖d1?** ♔f4 2 ♖d2 ♖h1+ 3 ♔b2 ♔e5! 4 ♖d8 (4 b4 ♖h8 draws) ♖h7! (not 4...♔e6? 5 ♔a3! ♔e7 6 ♖d3! ♖a1+ 7 ♔b4 ♖a8 8 ♔c5, winning as in diagram 286) 5 ♔a3 (5 b4 ♖h3! 6 b5 ♔e6 draws) ♖a7+! 6 ♔b4 ♖b7+! and White cannot make progress.

2) **1 b4** (1 ♖f8 also wins, transposing to the main line after 1...♔g4 2 b4!) ♔g4 (1...♖h4 2 b5 wins after 2...♖b4 3 ♖f5 ♔g4 4 ♖c5, 2...♖c4+ 3 ♔d2! or 2...♖h5 3 b6!) 2 ♖f8! (2 b5? ♖h5 3 b6 ♖b5 4 ♖f6 ♔g5! 5 ♖c6 ♔f5 draws, but now White has the option of defending the pawn from b8) ♔g5 (Black must keep his rook on the second rank or else White's king will support the pawn; 2...♖e2 loses to 3 b5 ♖e5 4 b6 ♖b5 5 ♖b8 and Black is one tempo too slow to reach the second rank with his king) 3 b5! (Black threatened to draw by improving the position of his rook with ...♖e2) ♖h4 (or 3...♔g6 4 b6! ♖h7 5 ♖b8 and wins) 4 ♔c2 ♖b4 5 ♖b8! ♔f6 6 ♔c3! ♖b1 7 ♔d4 ♔e6 8 ♔c5! and wins.

**B♖e2:** The alternatives are:

1) **1 b4?** ♔g4 2 ♖f8 ♖e4 3 b5 ♖b4 4 ♖b8 ♔f5 draws. In this line the transfer of the rook from h2 to e2 gives Black an extra tempo because with the rook on h2 Black's king blocks a rank and prevents the rook switching behind the pawn.

2) **1 ♖f8?** ♔g4! is the same.

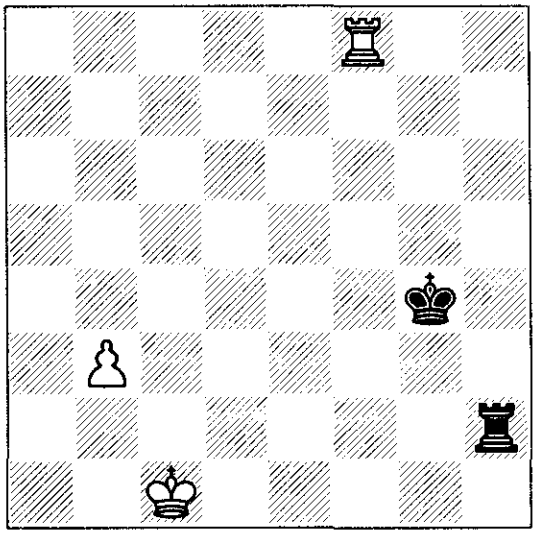
3) **1 ♖d1!** (White intends ♖d2, liberating his king) ♔f4 (1...♖h2 2 ♖d2! ♖h8 3 ♔b2 ♔f4 4 ♖e2 wins) 2 ♖d2! ♖e1+ (2...♖e8 3 ♔b2 ♔e3 4 ♖d5 ♔e4 5 ♖a5 wins as in diagram 271) 3 ♔b2 ♔e5 4 ♖d8! (not 4 b4? ♖e3!, but after 4 ♖d8! we see why Black's rook is badly placed on the e-file; if the rook could move to f7, g7 or h7 the position would be drawn) ♔f6 (4...♖h1 5 ♔a3 ♖h7 6 b4! wins, or 4...♔f5 5 b4 ♖e3 6 ♖f8+ and the king must move away) 5 ♖d3 (not 5 b4? ♖e3! drawing) ♔e7 6 b4 followed by ♔b3 wins.

**B♖a2:** The problem with the rook on h2 was that Black's king blocked a rank, preventing the rook from moving to the b-file, while with the rook on e2 Black's king eventually blocked the e-file. With the rook on a2 neither problem occurs and Black can draw, for example 1 ♖f8 (1 ♖d1 ♔f4 2 ♖d2 ♖a8 3 ♖e2 ♔f3! 4 ♖e7 ♖a2! draws) ♔g4! 2 b4 ♔g5! (2...♖a4? 3 ♖b8! ♔f5 4 ♔b2 ♔e6 5 ♔b3! ♖a1 6 ♖d8! wins) 3 b5 ♖a5! 4 ♖b8 ♔f6! (4...♔f5? 5 b6! wins) 5 ♔b2 ♔e7 6 ♔b3 ♔d7! 7 ♔b4 ♖a1 draws.

It is worth noting that all the above positions are drawn if White's king is on b1. Playing the rook to the second rank by ♖c1-c2 doesn't work because Black's king is only cut off on the c-file, while with the black rook on h2 the line 1 ♖f8 ♔g4 2 b4 ♖e2 3 b5 ♖e5 4 ♖b8 ♔f5! 5 b6 ♖b5+! and ...♔e6 is a draw because the position of the king on b1 gives Black an extra tempo.

Moving White's rook from f1 to f8 in diagram 293 favours White. The result is that White to play wins even if Black's king is on g4.

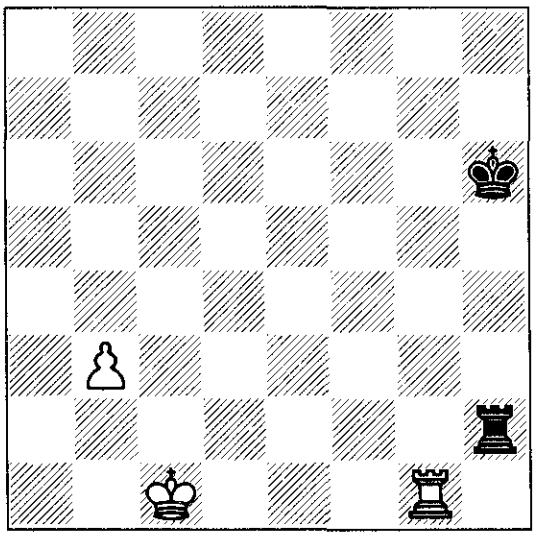
(**294**): The analysis proving that 1 b4! wins may be found in the previous diagram (line 2 under B♖h2). However, this is very much an exception.



294 +/=

When Black's king is on g4 the result is almost always a draw, for example moving Black's rook to e2 or White's king to b1 gives a draw. Even the small change of moving the rook from f8 to f7 destroys the winning line.

After all this complexity, readers will be pleased to learn that if Black's king is cut off on the h-file the situation is extremely simple: White always wins.

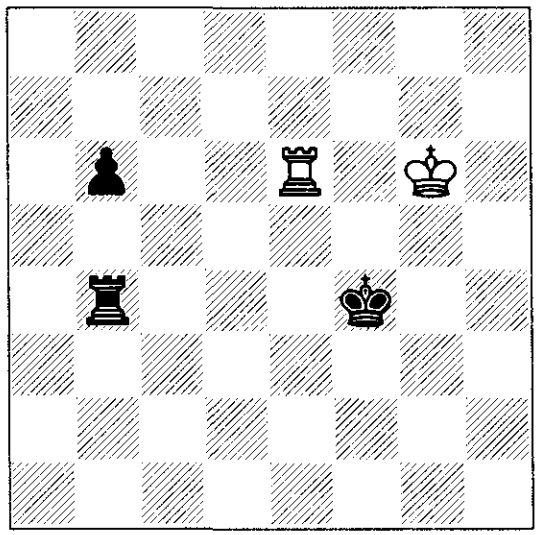


295 +/–

*Chéron, 1944 (version)*

(**295**): The winning plan is simple: 1 ♔b1 (1 ♖g3 intending b4 and ♖b3 is also good) ♖f2 (Black has no constructive moves) 2 ♔a1 ♖h2 3 b4 ♖h4 (or else b5) 4 ♖b1! ♔g6 5 ♔a2! (5 b5? ♔f6 6 b6 ♖h8! draws) ♔f6 6 ♔b3 ♔e7 (6...♔e6 7 ♖d1! ♖h8 8 b5! wins) 7 ♖d1 ♖h8 (or else White wins by b5 or ♔a4) 8 ♖d4 winning as in diagram 242.

## 2.5.4: Other situations



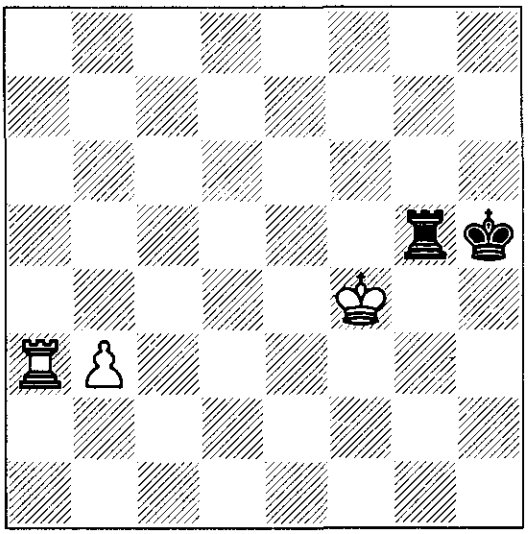
296 –/

**Dzindzichashvili – Polugaevsky**

*New York Open 1989*

(**296**): White was to play in the game, which continued 1 ♔f6 (threatening to draw by 2 ♔e7) b5! 2 ♖e5 (2 ♖e1 ♖d4 3 ♖b1 b4! 4 ♖b3 ♔e4 5 ♔e6 ♖c4! is the reciprocal zugzwang of diagram 225 with White to move, or 2 ♖b6 ♖b1 3 ♔e6 ♔e4! 4 ♔d6 ♔d4! 5 ♔c6 ♔c4!, followed by ...b4) ♖b1! (not 2...♖b2? 3 ♔e6! b4 4 ♖e1 drawing after 4...b3 5 ♔d5! ♖c2 6 ♖b1 or 4...♖d2 5 ♖b1! ♖d4 6 ♖b3! ♔e4 7 ♖h3) 3 ♖h5 (now 3 ♔e6 fails to 3...b4

4 ♖e2 b3) b4 4 ♖h4+ (4 ♔e6 b3! wins) ♔g3! (not 4...♔e3? 5 ♔e5! ♔d3 6 ♔d5! drawing) 5 ♖c4 b3! 6 ♖c3+ ♔f4 7 ♖c4+ ♔e3 8 ♔e5 ♔d3 0-1.



297 =/–

*Original*

**(297):** This is one of a family of four reciprocal zugzwang positions. The other three may be derived from this one by translating the kingside pieces (W♔d1 v B♔f2, ♖e2 or W♔e2 v B♔g3, ♖f3 or W♔e4 v B♔g5, ♖f5). These are related to diagrams 227 and 270 and as the analysis is rather similar, we only investigate the diagram position. With Black to play we have:

1) **1...♔h4** 2 ♖a4 ♖b5 (after the alternative 2...♔h5 3 b4 White has made progress and threatens ♖a5) 3 b4 followed by moving the king to the queenside.

2) **1...♔g6** 2 ♖a6+! ♔h5 3 ♖b6 ♖g4+ 4 ♔e5 ♖g5+ 5 ♔d6 ♖g6+ 6 ♔c7 ♖g7+ 7 ♔b8 ♔g5 8 b4 ♔f5 9 b5 ♔e5 10 ♖h6 and the pawn advances.

3) **1...♖g4+** 2 ♔e5! (2 ♔f5? ♖g3! draws) ♖g3 (the threats were 3 ♖a4 and simply to march the king to the square a4, providing shelter from lateral checks) 3 ♔d5 ♔g5 (or 3...♔g6 4 ♖a6+) 4 ♖a5 (White activates his rook) ♖g4 5 ♖a4 ♖g1 6 b4 ♖g4 7 ♔c5 ♔f6 8 ♖a7 leading to an easy win for White.

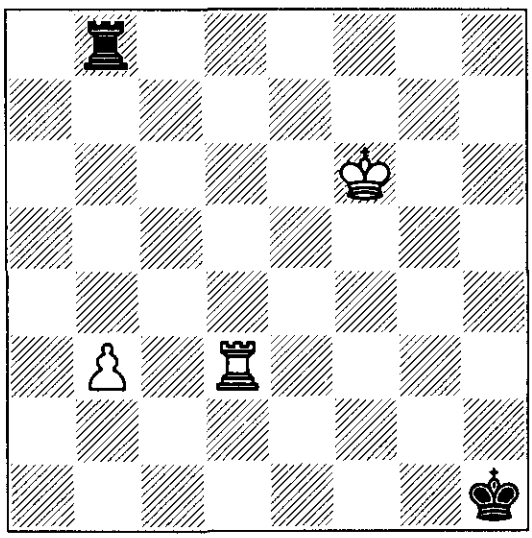
4) **1...♖b5** 2 ♔e4 ♔g5 3 ♔d4 ♖b8 4 ♔c5 ♖c8+ 5 ♔d6 ♖b8 6 ♔c7! ♖b5 (6...♖b4 7 ♔c6 threatens ♔c5 followed by b4, so forces 7...♖b8 in any case) 7 ♔c6! ♖b8 8 ♖a5+ ♔f6 9 ♖b5! and White has an improved version of diagram 273.

With White to play there are two possible plans:

1) **1 ♖a4** ♖b5! 2 b4 ♔g6! 3 ♔e4 ♔f6 4 ♔d4 ♔e7 5 ♔c4 ♖h5 (5...♖b8? 6 ♖a7+ ♔d6 7 b5! ♖h8 8 ♔b4! and wins) and Black has no trouble bringing his king in front of the pawn.

2) **1 ♔e4** ♔g6! 2 ♔d4 ♔f6 3 b4 ♔e6 and Black is in time.

Finally, as always, it pays to be on the alert for tactical points.



298 /–

*Krikheli, 1985*
*Commendation, Suomen Shakki*

**(298):** Black's king is cut off along a rank, so his only hope is to rush towards the queenside: 1...♔g2 (after 1...♖b5 White has a technical win, for example 2 ♔e6 ♔g2 3 ♔d6 ♔f2 4 ♔c6 ♖b8 5 ♔c5 ♔e2 6 ♖h3 ♖c8+ 7 ♔d4 ♖b8 8 ♔c3 ♖c8+ 9 ♔b2 ♖b8 10 ♖h4 followed by b4) 2 ♔e5! ♔f2 3 ♔d4 (3 ♖h3 ♔g2 only wastes time) ♔e2 4 ♖h3 (threatening to win by ♔c3) ♔d2 5 ♖h2+! (5 ♔c4 ♖c8+! 6 ♔b4 ♔c2 draws as in diagram 275) ♔c1 (5...♔d1 6 ♔c3 wins) 6 b4! (6 ♔c3? ♖c8+! is diagram 275 again) and the tactical resource 6...♖xb4+ 7 ♔c3! enables White to advance his pawn with an easy win.

There are 8 positions of reciprocal zugzwang in the ending of ♖+♙b3 v ♖. Four are mentioned in diagram 297, two in diagram 287 and one in diagram 276. This leaves the position W♔b5, ♖b4, ♙b3 v B♔b1, ♖b2, which is a direct analogue of diagram 238.

**Practical tips:** Owing to the relatively common nature of this ending, there are many positions of practical importance. Diagrams 271, 273 and 276 are extremely useful, and the winning procedure explained in diagrams 280-2 is fundamental to all endings with the pawn on b3. Finally, diagram 286 is worth knowing.

## 2.6: Pawn on the second rank

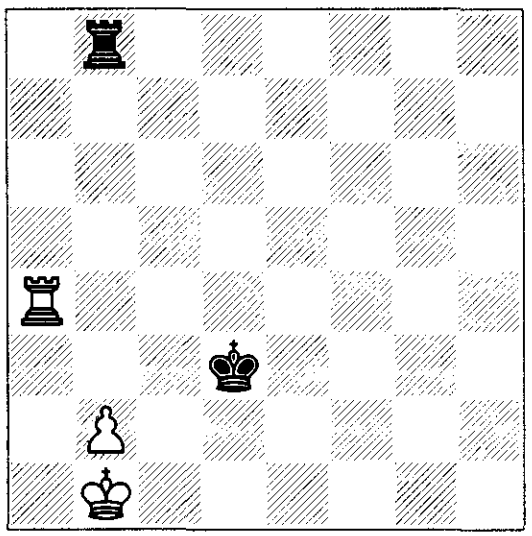
This section includes some of the most fascinating positions in the whole ending of ♖+♙ v ♖. Once again, Chéron deserves a lot of credit for his analysis. He correctly identified one of the most complex positions of reciprocal zugzwang, an astounding feat in the pre-computer age. We make the division which should already be familiar to readers:

2.6.1: Black's king is cut off along a rank 176
2.6.2: Black's king is cut off along a file 180
2.6.3: Other situations 190

### 2.6.1: Black's king is cut off along a rank

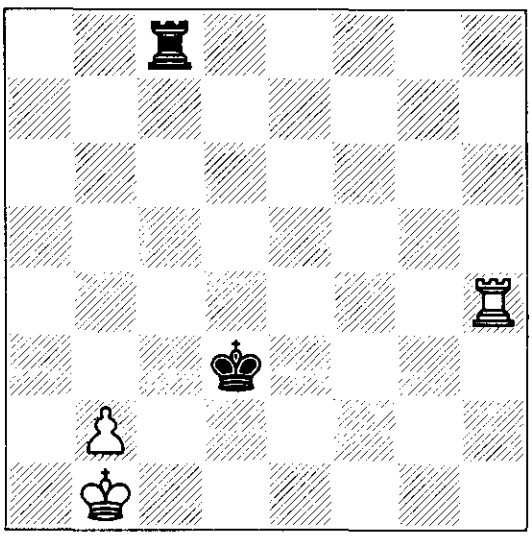
When the white rook is on the fourth rank, the results are directly analogous to those for the pawn on the third rank, i.e. if White can occupy the a-file with his rook and thereby liberate his king then he wins, otherwise the position is a draw.

**(299):** Firstly we take White to move. 1 ♔a2! (curiously, even though the position is winning with Black to move, White has only one move to win; 1 ♔a1? ♔c2! and 1 ♔c1? ♖c8+! 2 ♔b1 ♖c4! 3 ♖a5 ♖b4 4 ♔a2 ♔c4! are drawn) ♔c2 (for 1...♖h8 see Black to move) 2 ♖c4+! ♔d3 3 b3 ♖a8+ 4 ♔b2 ♖h8 5 ♖g4 ♖h2+ (after 5...♖c8 White wins as in diagram 272) 6 ♔a3!



299 +/–

*Chéron, 1944*



300 +/=

*Original*

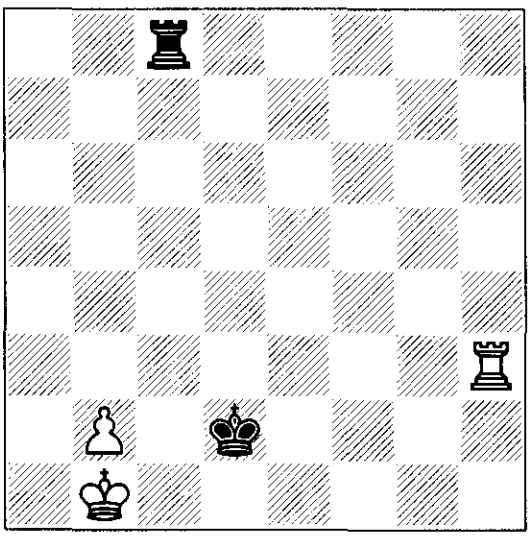
♔c3 7 b4 ♖h8 (7...♖h1 8 ♔a4! ♖a1+ 9 ♔b5! ♖a8 10 ♖g3+! ♔d4 11 ♔c6 wins easily) 8 ♖g5! ♔c4 9 ♔a4 ♖c8 10 ♖a5 with a win which is already familiar from, for example, diagram 257.

Black to move has the extra option of switching his rook to the side of the pawn, but this doesn't help: 1...♖h8 2 ♔a2 ♖h2 (2...♖h1 3 b3 ♔c3 4 ♖c4+ ♔d3 5 ♖g4 wins as with White to move) 3 ♔a3 ♖h1 4 ♖a5 (4 ♖g4 ♖h8 5 b3 also wins, as in the line with White to play) ♖a1+ 5 ♔b4! ♖h1 6 ♔a4 ♖a1+ (6...♔c4 7 b3+) 7 ♔b5 ♖h1 8 b4 ♔d4 9 ♖a8 ♔c3 10 ♖a3+ ♔d4 11 ♖g3 wins comfortably.

**(300):** With White to play there is a trap. He can seize the a-file by 1 ♖a4?, but then 1...♖c4! 2 ♖a5 ♖b4 3 ♔a2 ♔c4! is a draw. 1 ♔a2! is correct, and after 1...♖a8+ (1...♔c2 2 b3) 2 ♔b3! ♖b8+ 3 ♔a3 ♖a8+ 4 ♖a4 ♖b8 5 b3 (5 b4? ♔c3 draws) ♔c3 6 ♖c4+! ♔d3 7 ♔b2 we are back in familiar territory (diagram 272).

Black to play can draw, either by 1...♖c4 or by 1...♖a8 2 ♖g4 ♖a7 (or 2...♖a6, but not 2...♖a5? losing to 3 b4! followed by ♔b2), when White cannot make progress.

White always wins when his rook is on the third rank cutting off Black's king on d2.

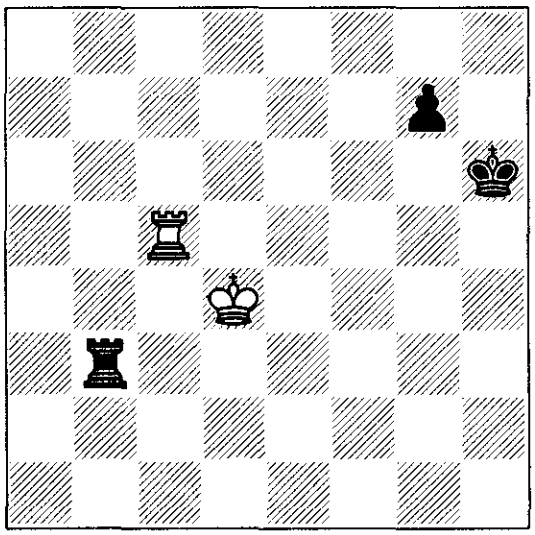


301 +/–

*Chéron, 1944*

**(301):** We take Black to move. The threat is 2 b4 ♖b8 3 ♖b3 ♖b5 4 ♔b2,

but after 1...♖c4 (1...♖b8 2 b3 followed by ♔b2, or 1...♖c1+ 2 ♔a2 ♖c8 3 b4 ♔c2 4 ♖h5! ♖a8+ 5 ♖a5!, followed by ♖c5+ and ♔b3) 2 b3 (2 ♖g3 is also very good, as Black has no waiting move) ♖c3 3 ♖h2+! ♔d3 4 ♔b2! ♖c8 5 ♖h4 White has succeeded in shifting the whole position up by one square. He then wins as in diagram 272.

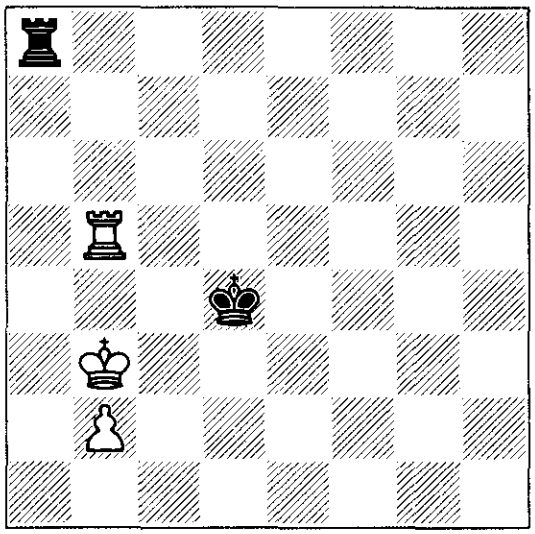


302 –/

**Segal – Clement**
*Mar del Plata, 1990*

**(302):** White's king is cut off along a rank, and after 1 ♔e4 Black can win by 1...g5! 2 ♖c1 ♖h3 reaching diagram 257. The game continued 1 ♖c1 ♔h5 (or 1...♖h3 followed by ...g5, but not 1...g5? 2 ♖h1+! ♔g6 3 ♔e4! drawing) 2 ♔e4 (2 ♖h1+ ♔g4! 3 ♖g1+ ♖g3!, followed by ...g5) g5 3 ♖h1+ ♔g4! (we now have diagram 257) 4 ♖g1+ ♖g3 5 ♖h1 ♖g2 6 ♔e3 ♔g3! 7 ♖h5 g4! 8 ♖h8 ♖f2 9 ♖g8 ♖f7 10 ♔e2 ♔h3 11 ♖g6 g3 12 ♖g8 ♔h2 0-1 as the Lucena position is only a few moves away.

It is sometimes possible for White to win when his rook is on the fifth rank and Black's king is on d4, but he needs to have an active king. This situation is quite complex.



303 =/–

*Original*

**(303):** This reciprocal zugzwang is fundamental. It is closely related to diagram 276. With Black to play we have:

1) **1...♖a7** (1...♖a6 2 ♔b4! is similar) 2 ♔b4! ♔d3 (after 2...♖a2 White wins by 3 b3!, and not 3 ♔b3? ♖a8! putting White is in zugzwang) 3 ♖b8 and now:

1a) **3...♖a2** 4 ♔c5 ♖a5+ 5 ♔b6 (not 5 ♖b5? ♖a8! when 6 b4 ♔c3! and 6 ♖b7 ♖c8+ 7 ♔b5 ♔c2 8 b4 ♔b3 are drawn) ♖a4 (5...♖h5 6 b4 ♔c4 7 ♔a6! ♖h6+ 8 ♔a5! wins) 6 ♔b5 ♖h4 7 b4 ♔c3 8 ♔a5 and wins.

1b) **3...♔c2** 4 ♔c5 ♖c7+ (4...♖a5+ 5 ♔c4 ♖h5 6 b4! wins) 5 ♔b6! (exploiting the fact that Black's rook is on the second rank) ♖c4 6 ♔b5 ♖h4 7 b4 wins.

1c) **3...♖h7** 4 b3 ♖h4+ 5 ♔a5 ♖h5+ 6 ♔a4 ♖h1 7 b4 is simple.

2) **1...♖c8** 2 ♔a4 ♖a8+ 3 ♖a5 ♖h8 4 b4 wins.

3) **1...♔d3** 2 ♖d5+ ♔e4 3 ♔c4 ♖a4+ 4 ♔b5 ♖a2 5 ♖d2! ♔e3 6 ♖h2 ♔f4 (6...♔d4 7 ♖h4+ and 8 b4) 7 ♔b6 ♔f3 (if Black plays his king to the e-file then White checks on the h-file and plays b4, while 7...♔g3 8 ♖c2 is followed by a check on the c-file and again b4) 8 ♖h3+ ♔g4 9 ♖b3 ♔f5 10 ♖b5+ ♔e6 11 b4 ♔d7 12 ♖c5 winning.

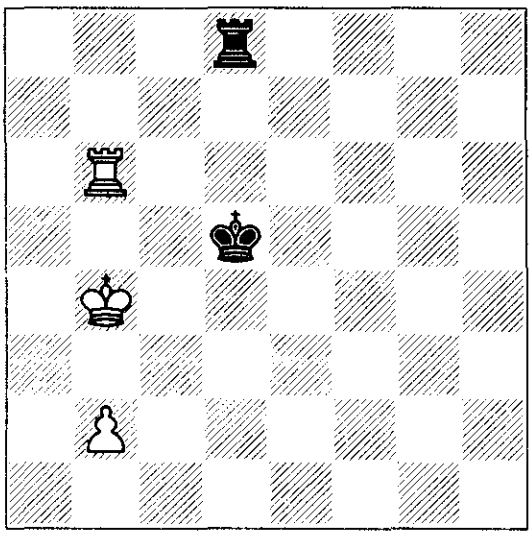
4) **1...♔e4** 2 ♔c4 ♖a2 3 b4 ♖c2+ 4 ♔b3 ♖c8 5 ♖h5 winning as in diagram 259.

However, White to play cannot win, for example 1 ♔b4 (1 ♖h5 ♖b8+! 2 ♔a3 ♔c4 is an instant draw) ♔d3! 2 ♖b7 (2 b3 ♔c2! 3 ♖b7 ♖h8 is an easy draw) ♔c2 3 ♔c5 ♖c8+ draws as, unlike line 1b above, White cannot gain a tempo by attacking Black's rook.

A similar situation may arise if the white rook is on the sixth rank.

**(304):** The basic idea is quite simple. If White can play ♔b5 and b4 then he normally wins, but in the diagram position Black can meet this plan by ...♔d4 and ...♔c3. If the rook moves away from d8 then White wins by 1 ♔b5 ♔d4 2 ♖d6+. Here are the details with Black to move:

1) **1...♖h8** 2 ♔b5! ♔d4 3 ♖d6+! ♔e5 4 ♖c6 ♖b8+ (4...♔d5 and 4...♔d4 are met by 5 b4 and in the latter case Black cannot continue with ...♔c3) 5 ♖b6! ♖h8 6 b4 ♔d4 7 ♔a5 ♖a8+ 8 ♖a6! (8 ♔b5? ♔c3! draws) ♖c8 9 b5 and wins.



304 =/–

*Original*

2) **1...♔d4** 2 ♖b5! (2 ♔b5? ♔d3! 3 b4 ♔c3! draws – see Black to move) ♖a8 (2...♔d3 3 ♔a4 ♔c4 4 b4 wins) 3 b3 ♔d3 4 ♖a5 ♖b8+ 5 ♔a4 ♔c3 6 ♖c5+! ♔d4 7 b4 wins.

3) **1...♔e4** (1...♔e5 2 ♔a5 is even simpler because Black cannot play 2...♖d5+) 2 ♔a5 (2 ♔b5? ♔d4! draws) ♖d5+ 3 ♔a6 ♖d1 4 b4 ♖a1+ 5 ♔b5! (5 ♔b7? ♔d5! 6 b5 ♖a5! draws) ♔d5 6 ♖a6 ♖h1 7 ♖g6 ♖b1 8 ♔a5 and White wins.

4) **1...♖d7** 2 ♔b5 ♔d4 3 b4 ♖d8 (after 3...♔c3 4 ♖c6+ ♔b3 5 ♔a5 ♖a7+ 6 ♔b6! White exploits the inferior position of Black's rook) 4 ♔a5 winning as in line 1.

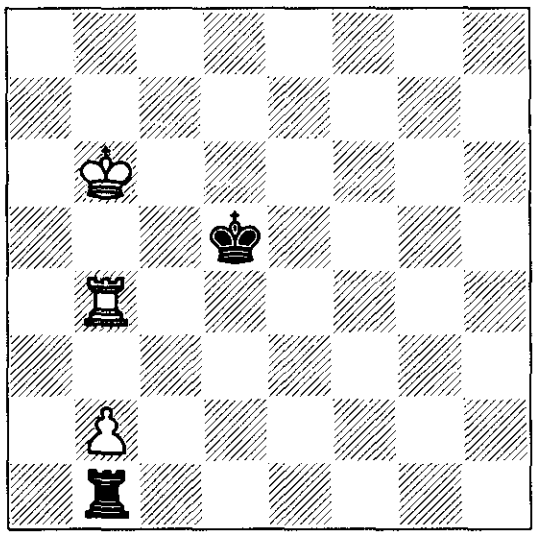
With White to move, the lines are:

1) **1 ♔b5** ♔d4! 2 ♖b7 (2 b4 ♔c3! 3 ♖c6+ ♔b3! 4 ♔c5 ♖h8 5 b5 ♖h5+! 6 ♔b6 ♔b4! wins the pawn) ♔d3! (the only waiting move; 2...♖d5+ 3 ♔a4 ♖d8 loses to 4 ♖b5!) 3 ♔b6 ♔c4 4 b4 ♖h8 5 b5 ♔b4! draws.

2) **1 b3** ♖a8! (not 1...♔d4? 2 ♖b5! as in line 2 above) and we have the

reciprocal zugzwang of diagram 276 with White to move.

Finally we cover one exceptional position.



305 =/–

*Original*

**(305):** With Black to play:

1) **1...♔e6** 2 ♖b5 ♔d7 (2...♔d6 3 b4 is similar) 3 ♔b7! ♔d6 4 b4 ♖b2 5 ♔a6 (threatening ♖b7, followed by b5) ♖a2+ 6 ♖a5! ♖c2 (6...♖b2 7 b5 ♔c7 8 ♖a1 ♖b3 9 ♖c1+ ♔b8 10 ♖h1 wins as in diagram 213) 7 ♔b6 (7 b5? ♔c7! draws after 8 ♔a7 ♖b2! or 8 ♖a1 ♔b8! 9 ♖h1 ♖c8!) ♖c6+ (7...♖c8 8 ♖a7) 8 ♔b5! ♖c7 (8...♖c1 9 ♖a7 wins, or 8...♖c8 9 ♖a6+! also winning after 9...♔d5 10 ♔a5 or 9...♔d7 10 ♖a7+ ♔d6 11 ♔a5) 9 ♖a8 ♖b7+ (9...♖c1 10 ♖a7! ♖b1 11 ♖b7 ♖b2 12 ♔a6 followed by b5) 10 ♔a5! ♔d7 (10...♔c6 11 ♖c8+ ♔d7 12 ♖c1 wins, while 10...♔c7 11 b5 is the reciprocal zugzwang of diagram 233 with Black to move) 11 ♖h8 ♖a7+ 12 ♔b6 followed by b5 with an easy win.

2) **1...♖c1** and now:

2a) **2 ♖h4?** ♖c6+! 3 ♔b7 ♖c4! 4 ♖h5+ ♔d4! 5 ♖b5 ♔d3 6 ♔b6 ♔c2 7 ♔a5 ♖c8! 8 b4 ♔b3 draws.

2b) **2 b3?** ♖b1! (incredible, but this is the only move to draw; 2...♖c8? loses after 3 ♖b5+! ♔d6 4 ♔b7 ♖c7+ 5 ♔a6 ♖c1 6 b4 ♔c6 7 ♖b6+! ♔c7 8 ♖b7+! ♔c8 9 b5) 3 ♖b5+ ♔d4! 4 b4 ♖b2 (not 4...♔c4? 5 ♖c5+!) 5 ♔a5 ♖a2+! with repetition.

2c) **2 ♖b5+!** ♔d6 (2...♔d4 3 ♖h5 wins after 3...♖b1 4 ♖h4+! and 5 b4, or 3...♖c4 4 ♔a5 followed by b4) 3 b4 ♖b1 (3...♖c4 4 ♔a7, followed by ♖b8) 4 ♔a6 winning as in line 1.

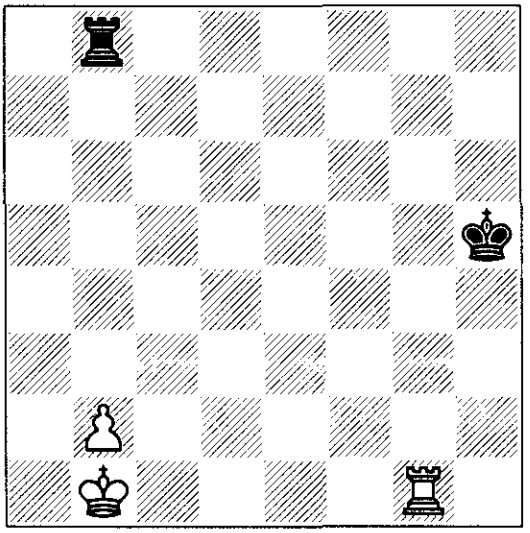
3) **1...♔d6** 2 ♖d4+ ♔e5 3 ♖d2! (3 ♖b4 ♔d5! and now White is in zugzwang) ♔e4 4 ♔b5 ♔e3 5 ♖h2 ♔d4 6 b4 ♔d5 7 ♖d2+ wins easily.

With White to play the situation is less complex. 1 b3 ♖b2! draws as in line 2b above, while other moves allow Black's king to approach.

There is a related reciprocal zugzwang position in which some pieces are shifted down a rank (W♔b5, ♖b3, ♙b2 v B♔d4, ♖b1). The analysis is very similar and we need not go into details.

### 2.6.2: Black's king is cut off along a file

This is one of the most interesting and complex sections in the whole book. We start by asking the usual question: how far away must Black's king be in order for White to win? When Black's king is trapped on the h-file and White's king defends the pawn then Black has no hope of saving the game.



306 +/–

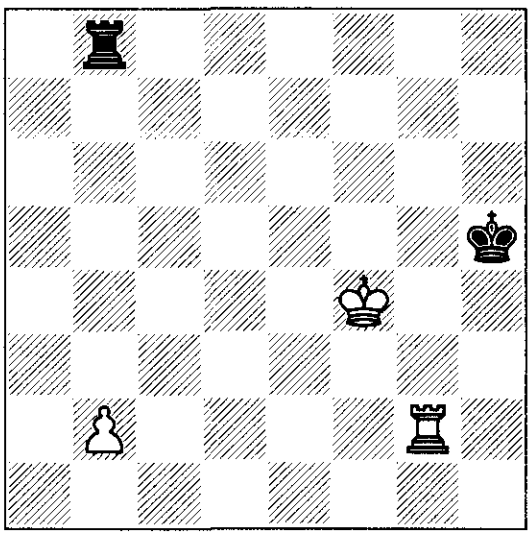
**(306):** White can win by bringing his king out, but it is possible to win by another, simpler, method. This method depends on the following two plans: firstly, to play ♖g6-a6, cutting off the black king along a rank, followed by ♔a2-a3 and b4, and secondly ♖g3 followed by b3. It turns out that Black cannot prevent both plans. From the diagram position White wins by 1 ♖g3 and now:

1) **1...♖f8** (1...♖b7 2 b3 ♔h4 3 ♖e3 ♔g5 4 ♔b2, and we know that with a pawn on b3 an e-file cut-off wins) 2 b3 (diagram 295 shows that White wins from this position) ♔h4 (2...♖f2 3 b4) 3 ♖g2 ♔h3 4 ♖g5 ♔h4 5 ♖c5 wins.

2) **1...♔h4** 2 ♖g6 (White switches to the other plan) ♔h5 (2...♖f8 3 b3) 3 ♖a6 ♔g5 4 ♔a2 ♔f5 5 ♔a3! ♔e5 6 b4! ♔d5 7 ♔a4 ♔c4 8 ♖c6+! ♔d5 9 b5 and wins.

Moving Black's king to another square on the h-file doesn't help, since he cannot cover both g3 and g6. For example, if Black's king starts on h4 then White plays 1 ♖g6.

Complex positions can arise if the white king is far away from the pawn, so that Black has the possibility of dislodging White's rook with his king.



307 =/–

*Original*

**(307):** This is one of the more unlikely-looking positions of reciprocal zugzwang. If White can bring his king to the b-pawn while keeping his rook on the g-file then he will win.

Black to play:

B1) **1...♔h6** (now it takes Black one move longer to attack White's rook) 2 ♔e4 ♔h5 3 ♔d3 ♔h4 4 ♔c2 and the rook stays on the g-file.

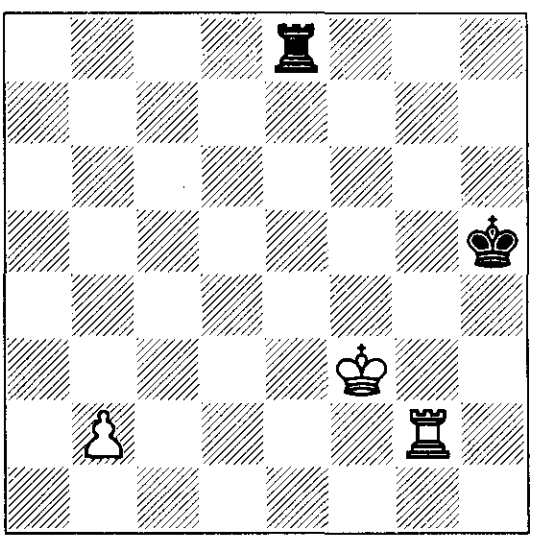
B2) **1...♖b7** (1...♖e8 2 b4) 2 ♔e4 ♔h4 3 ♔d3 ♔h3 4 ♖e2 ♖b8 (after 4...♔g4 5 ♔c3 ♖c7+ 6 ♔b4 ♖b7+ 7 ♔a5 ♔f3 8 ♖c2 ♖a7+ 9 ♔b6 Black loses because his rook has lost its checking distance, for example 9...♖a4 10 ♔b5 ♖a2 11 ♖c3+ ♔e4 12 b4 ♖a8 13 ♖c6 and wins) 5 ♔c2 ♖c8+ 6 ♔b1 ♖b8 (6...♔g4 7 b3 ♔f3 8 ♖e6 wins) 7 ♖e4 ♔g3 8 b4 ♔f3 9 ♖h4, followed by ♔b2 winning.

With White to play:

W1) **1 ♔e4** (1 ♔f5 ♔h4! only helps Black) ♔h4! 2 ♔d3 ♔h3! 3 ♖e2 (3 ♖c2 ♔g4 is similar) ♔g4! (3...♔g3? 4 ♔c2 wins after 4...♔f3 5 ♖e5 ♖c8+ 6 ♔d3 ♖b8 7 ♔c3 ♖c8+ 8 ♔b4 or 4...♖c8+ 5 ♔b1 ♔f3 6 ♖c2 ♖b8 7 ♖c4!) 4 ♔c2 (4 ♖e4+ ♔f5 5 b4 ♖d8+ 6 ♖d4 ♖c8! 7 ♖c4 ♖d8+! 8 ♔c3 ♔e6! 9 b5 ♔d7! followed by ...♖c8 draws) ♖c8+! 5 ♔b1 (there is no point going up the board when Black is checking from the eighth rank) ♖b8! 6 ♖f2 ♖h8! reaching diagram 311 with White to move.

W2) **1 ♔e5** ♔h4! 2 ♔d6 ♔h3! 3 ♖c2 ♔g3! (3...♔g4 4 ♖c4+! and 5 b4 wins) 4 ♔c7 (4 ♖c3+ ♔f4 5 b3 ♔e4! draws) ♖b4 5 ♖c3+ (5 ♔c6 ♖b8) ♔f4 6 b3 ♔e4 followed by ...♔d4 draws.

It turns out that diagram 307 is the introduction to a series of three closely related reciprocal zugzwang positions.



308 =/–

*Original*

**(308):** This time we start by taking White to play. He may try:

W1) **1 b3** ♖b8! 2 ♖b2 ♖e8! 3 ♖e2 (3 b4 ♔g5 is an easy draw, while 3 ♔f4 ♔g6! only helps Black) ♖b8! 4 ♖e3 ♖b4! (Black must stop ♔e4) 5 ♔e2 ♔g5 6 ♔d2 ♔f4! 7 ♖h3 ♔e5 8 ♔c3 ♖b8 draws.

W2) **1 b4** and now Black has three moves to make a draw. The first is 1...♖b8 2 ♖g4 (2 ♖b2 ♔g6 3 ♔e4 ♖d8! draws after 4 ♖f2 ♖b8! or 4 ♔e5 ♔f7! 5 ♖h2 ♖d1) ♖d8 (threat ...♖d3+) 3 ♖e4 (3 b5 ♖d3+! 4 ♔e4 ♖b3! draws) ♔g6 4 ♔e3 ♔f5 5 ♖d4 ♖c8 draws. Black may also draw by 1...♖e5 2 ♔f4 (2 ♖b2 ♔g5 or 2 ♖g4 ♖b5) ♖b5! 3 ♖b2 ♔g6! 4 ♔e4 ♔f6 5 ♔d4 ♔e6! 6 ♔c4 ♖b8! 7 ♖d2 ♖c8+! 8 ♔b3 ♖b8!. Finally, the simplest draw is 1...♖e1 2 ♖b2 (2 ♖g4 ♖f1+! 3 ♔e2 ♔xg4! draws) ♔g5 3 b5 ♔f5.

W3) **1 ♔f4** ♖b8! is diagram 307.

Black to play must weaken his position:

B1) **1...♔h6** 2 b4 and now the three drawing moves given above (with the king on h5) all lose:

B1a) **2...♖b8** 3 ♖g4! ♔h5 (3...♖d8 4 ♔e4) 4 ♖d4 ♖e8 (or else ♔e4) 5 ♖e4! ♖d8 6 ♔f4 ♔g6 7 ♔e5! ♔f7 8 ♖d4 ♖h8 9 ♔d6 ♖d8+ 10 ♔c5 ♖c8+ 11 ♔b6 ♔e6 12 b5 and wins.

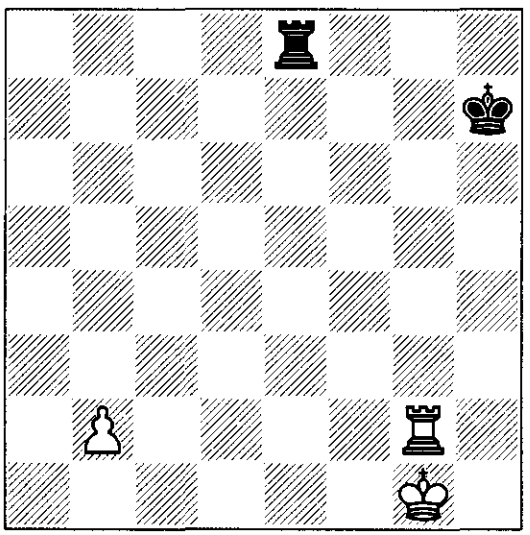
B1b) **2...♖e5** 3 ♖g4! ♔h5 4 ♖e4! ♖b5 5 ♔e3 (White has gained a crucial tempo) ♔g5 6 ♔d3! ♔f5 7 ♖h4! ♔e6 (7...♔g5 8 ♖d4) 8 ♔c4! ♖b8 (8...♖g5 9 ♖d4!) 9 ♔c5 ♖c8+ 10 ♔b6 wins.

B1c) **2...♖e1** 3 ♖g4 ♔h5 4 ♖e4! ♖d1 5 ♔e3 ♔g5 6 ♖d4! ♖c1 7 ♔e4 ♔f6 8 ♔d5! ♔e7 9 ♖c4! ♖d1+ 10 ♔c5 ♔d7 11 ♔b6 wins.

B2) **1...♔h4** 2 b4 ♖e1 (2...♖e5 3 ♔f4 wins immediately while 2...♖b8 3 ♖g4+ transposes to line B1a above) 3 ♖g4+ is line B1c.

B3) **1...♖e7** (1...♖b8 2 ♔f4! is diagram 307) 2 ♔f4! (threatening to win by 3 b4 ♖e1 4 ♖g5+ ♔h6 5 ♖e5 ♖b1 6 ♖e4 followed by ♔e5) ♖b7 3 ♔e4 transposing to line B2 in diagram 307.

B4) **1...♖e1** 2 ♔f4 (intending 3 ♔f5 ♔h6 4 b4) ♖d1 3 ♔f5 (not the quickest win, but the simplest) ♖d5+ (3...♔h4 4 ♖g4+ followed by b4) 4 ♔e4 ♖b5 5 ♔d3 and White defends the pawn without sacrificing the g-file.



309 +/

*Original*

**(309):** White wins by 1 ♔f1!!, and not 1 ♔f2? ♔h6! and White is in zugzwang. I mentioned above that diagram 308 is the first in a series of three related reciprocal zugzwangs. The other two differ only in the king positions; one has ♔f2 v ♔h6 and the other ♔f1 v ♔h7. I will only summarize the analysis, as it resembles that of diagram 308:

1) **1 ♔f2?** ♔h6! 2 b3 (2 ♔f3 ♔h5 is diagram 308) ♖b8 3 ♖g3 ♔h5! 4 ♔e2 ♔h4! 5 ♖e3 ♔g5 6 ♔d2 ♔f4! and White cannot bring his king over to the b-pawn without relinquishing the e-file cut-off.

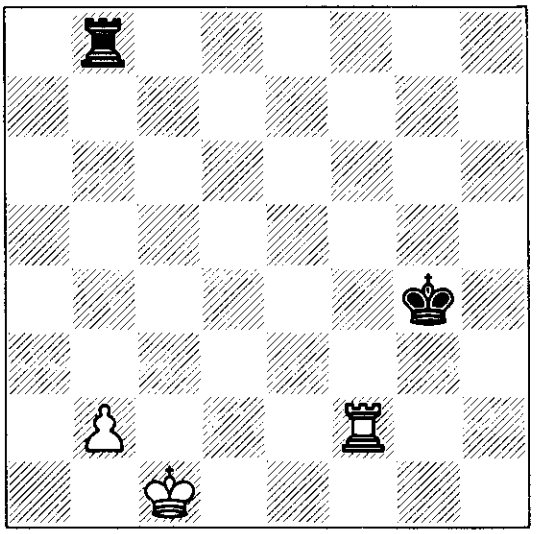
2) **1 ♔f1!!** ♔h6 (or 1...♖e7 2 ♔f2 and if Black does nothing White's king advances up the f-file, while playing ...♔h6 transposes) 2 ♔f2! ♖e7 (2...♔h5 3 ♔f3! is diagram 308) 3 ♔f3! ♖e5 (3...♔h5 4 ♔f4! is diagram 308) 4 ♔f4 ♖e8 (4...♖b5 5 ♔e4 is similar to diagram 307) 5 b4 (this move wins now that White's king is more active) ♖b8 6 ♖b2! ♖e8 7 ♔f5 ♔g7 8 b5! ♔f7 9 ♖c2! transposing to diagram 223.

The situation starts to become complex when Black's king is on the g-file. Whether White wins or not depends on the exact positions of the pieces, and to confuse matters still further there are some reciprocal zugzwangs thrown in!

First of all suppose that White's king is on b1 and pawn on b2, with Black's rook on b8. Then if White's rook is on the f-file he always wins with the move, except possibly if Black's king is on g4. In order to understand this ending, we must first analyse three positions of reciprocal zugzwang.

**(310):** First we take Black to move:

B1) **1...♔g5** 2 ♔c2 ♖c8+ 3 ♔d3 ♖d8+ 4 ♔c4 ♖c8+ 5 ♔d5 ♖d8+ 6 ♔c5 ♖c8+ 7 ♔b6! ♖b8+ (7...♖c4 8 ♔b5 and 9 b4) 8 ♔a7 (this looks odd, but as we shall see White needs an empty c-file to switch his rook to the b-file) ♖b3 9 ♔a6! (threat 10 ♔a5, after which White can force the pawn to



310 =/–

*Fila (1932), Ratner (1937) and Chéron (1959)*

b4) ♖b8 (9...♔g4 10 ♔a5! ♔g3 11 ♖d2 ♔f4 12 ♔a4 ♖b8 13 b4! ♖a8+ 14 ♔b3 ♔e5 15 b5! wins, but not 11 ♔a4? ♖b8! drawing after 12 ♖d2 ♖a8+! or 12 ♖e2 ♔f3!) 10 ♖c2 (now we can see why Black's king is badly placed on g5; if it were on g4, Black could draw by playing ...♔f3, but it turns out that the fourth, fifth and sixth ranks are all dangerous, so Black's king cannot reach a safe square in one move) with a further branch:

B1a) **10...♔f5** 11 ♖c5+! ♔e6 (or 11...♔e4 12 ♖b5! ♖a8+ 13 ♔b7! ♖a4 14 b3! ♖d4 15 b4 ♔d3 16 ♔b6 ♔c3 17 ♔a5! ♖d8 18 ♖c5+ ♔d4 19 ♖c6 winning, but not 14 b4? ♔d4 drawing) 12 ♖b5 ♖a8+ 13 ♔b7! ♖a4 14 b3 (not 14 b4? ♔d6! reaching the reciprocal zugzwang of diagram 239 with White to move) ♖h4 15 b4 ♔d6 16 ♖b6+ ♔d5 17 ♔a6! ♖c4 18 ♔a5 frees the rook and wins.

B1b) **10...♔f6** 11 ♖c6+! ♔e5 12 ♖b6! ♖a8+ 13 ♔b5! ♔d4 14 ♖d6+! ♔e5 15 ♖h6 winning as in line 1 of diagram 304.

B1c) **10...♔f4** 11 ♖c4+! ♔e5 12 b4! ♖a8+ 13 ♔b6 ♔d5 14 ♖h4 ♖b8+ 15 ♔a7 ♖b5 16 ♔a6! and wins.

B1d) **10...♖a8+** 11 ♔b7 ♖a4 12 ♔b6 and Black cannot prevent b4.

B2) **1...♔g3** 2 ♖f5 (White switches to cutting the king off along a rank) ♖c8+ (2...♔g4 3 ♖c5 ♔f4 4 ♔c2! ♔e4 5 ♔c3! wins) 3 ♔d2 ♔g4 (3...♖d8+ 4 ♔c3 ♖c8+ 5 ♔b4 only helps White) 4 ♖b5 ♔f4 5 ♔d3! ♖c1 (5...♖d8+ 6 ♔c4 ♖c8+ 7 ♖c5) 6 b4 ♖d1+ 7 ♔c4 ♖c1+ 8 ♔d5 ♖d1+ 9 ♔c6 ♖b1 10 ♖b8 wins.

B3) **1...♖c8+** 2 ♖c2! (not 2 ♔b1? ♖h8! – see White to play) ♖h8 3 ♖c5! (White cuts off Black's king with gain of tempo) ♔f4 (3...♖h3 4 ♔c2 is worse) 4 ♔c2! (after 4 b3 Black can draw by 4...♖h2!, but not 4...♔e4? 5 ♔b2! ♔d4 6 ♖a5! and wins as in diagram 271) ♖h3 (after 4...♔e4 5 ♔c3 White can play b4) 5 b3 ♔e4 6 ♔b2 ♔d4 7 ♖a5, with diagram 271 again.

B4) **1...♖b7** 2 ♔c2 (Black has no chance without the maximum checking distance for his rook) ♖c7+ 3 ♔d3 ♖d7+ 4 ♔c4 ♖c7+ 5 ♔d5 ♖b7 6 ♔c5 ♔g3 7 ♖d2 ♖c7+ 8 ♔b6 ♖c4 9 ♔b5, followed by b4.

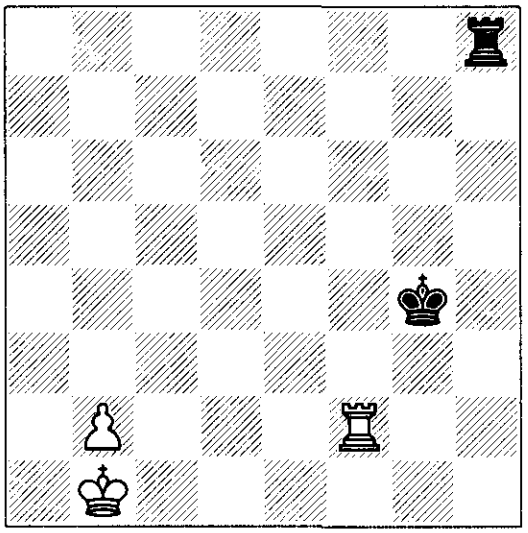
With White to play the analysis runs:

W1) **1 ♔c2** ♖c8+ 2 ♔d3 ♖d8+ 3 ♔c4 ♖c8+! 4 ♔b5 ♖b8+! 5 ♔c5 (5 ♔a6 ♔g3 6 ♖c2 ♔f3! moves the king off the dangerous fourth rank and draws) ♖c8+ 6 ♔b6 ♖b8+! (6...♔g3? 7 ♖f7!) 7 ♔a7 ♖b3 8 ♔a6 ♔g3 9 ♖c2 ♔f4 10 ♔a5 ♔e5! 11 ♔a4 ♖b8! 12 b4

♖a8+! 13 ♔b3 ♔d6 14 b5 ♔d7! followed by ...♖c8 drawing.

W2) **1 ♔b1** ♖h8! draws – see diagram 311.

W3) **1 ♖f6** ♖c8+ 2 ♔d2 ♖d8+ 3 ♔c3 ♖c8+! 4 ♔d4 ♖b8! 5 ♖f2 ♖d8+ with a draw as in line W1.



311 =/–

*Chéron, 1960*

(**311**): Again we start with Black to play:

B1) **1...♖b8** 2 ♔c1! is diagram 310 with Black to play. At first sight this comment involves circular reasoning, because this diagram refers to diagram 310, while diagram 310 refers to diagram 311. However, line B1 depends only on the fact that diagram 310 is a loss with Black to play, and the black to move analysis in diagram 310 did not mention diagram 311.

B2) **1...♖e8** 2 b3! (threatening 3 ♔b2) ♔g3 3 ♖c2 ♔f4 4 ♔b2 transposes to diagram 285. In this variation White wins because Black's inferior rook position prevents him playing 4...♔e5.

B3) **1...♖d8** 2 b3! ♔g3 3 ♖f6 (this is the quickest win, but 3 ♖c2 ♔f4 4 ♔b2! ♔e5 5 ♖e2+! is another way to exploit the position of Black's rook on the d-file) ♖d2 (or else ♔b2) 4 ♔c1 (now White wins because he can move his king off the dangerous b-file with gain of tempo) ♖e2 5 b4 (White intends meeting 5...♖e4 by 6 b5, which is only possible when the king is on c1) ♔g4 6 b5! ♔g5 (6...♖e5 7 b6 wins) 7 ♖b6! (7 ♖f8? ♖e5 8 ♖b8 ♔f6 9 b6 ♖b5 draws) ♖e4 (7...♔f5 8 ♖b8! ♖e5 9 b6! leaves Black's king stranded outside the drawing zone) 8 ♔c2 ♔f5 9 ♔c3 ♔e5 10 ♖c6 ♔d5 11 ♖c8 wins.

B4) **1...♖c8** and **1...♖a8** are both met by 2 b3 and Black cannot prevent ♔b2.

B5) **1...♖h7** 2 b3 ♔g3 3 ♖f8! (this exposes the weakness of 1...♖h7) ♖h2 4 ♔c1! ♔g4 5 b4! winning as in diagram 294.

B6) **1...♔g5** 2 b3 followed by ♔b2.

B7) **1...♔g3** 2 ♖f5 (White wins as in line B2 of the previous diagram) ♔g4 3 ♖a5 ♔f4 4 ♔a2 ♔e4 5 ♔a3 ♖h1 (5...♔d4 6 b4) 6 ♔a4 ♔d4 7 b4 with a familiar win.

Now suppose it is White's move:

W1) **1 ♖f6** (threat 2 ♖a6 ♔f5 3 ♔a2!, winning after 3...♔e5 4 ♔a3! or 3...♖h3 4 b3!) ♖b8! and we reach diagram 312 with White to play.

W2) **1 ♖f7** ♖e8 and now:

W2a) **2 ♖f6** ♖b8! is diagram 312 again.

W2b) **2 ♖a7** ♔f5! (2...♔f4? 3 ♖a5! wins) 3 ♖a6 ♔e5 4 ♔a2 ♔d5 5 ♔a3 ♔c5 draws; attempting to cut off the black king along a rank normally only

works when White's rook occupies the fifth rank.

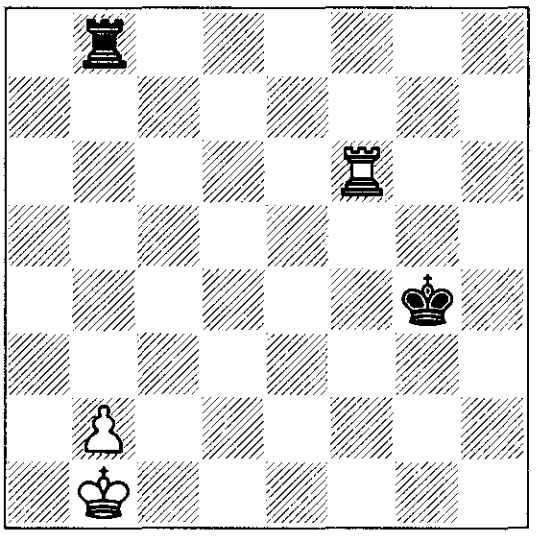
W2c) **2 b3** ♖e2! and Black has an improved version of positions analysed as drawn in section 2.5.3.

W2d) **2 ♖f1** ♖d8! is line W3.

W3) **1 ♖f1** ♖d8 2 ♔c2 (2 ♖f7 ♖e8! or 2 b3 ♖d2! draws) ♖c8+! 3 ♔d3 ♖d8+! 4 ♔c4 ♖c8+! 5 ♔d5 ♖d8+! (5...♖b8? 6 ♖b1! wins) 6 ♔c6 ♖b8! (6...♖c8+? 7 ♔b7! ♖c4 8 ♖f6 wins) 7 ♖b1 ♖b3! 8 ♔c5 ♔f5! 9 ♔c4 ♖b8! 10 b4 ♔e6! (10...♔e5? 11 ♔c5! wins) 11 ♖d1 ♖c8+! 12 ♔b3 ♖b8! (12...♔e7? 13 ♖d4 wins) with a draw as in diagram 241.

W4) **1 ♔c1** ♖b8! is diagram 310 with White to move.

W5) **1 ♔c2** ♖c8+ – see line W1 of diagram 310.



312 =/–

*Original*

(**312**): Suppose Black is to move:

B1) **1...♖b7** 2 ♖f2! (the threat is to win by 3 ♔c2 ♖c7+ 4 ♔d3 ♖b7 5 ♔c3 ♖c7+ 6 ♔d4 ♖b7 7 ♔c5 ♔g3 8 ♖d2 ♖c7+ 9 ♔b6 ♖c4 10 ♔b5, followed by b4, so Black has to regain the maximum checking distance) ♖b8 3 ♔c1! reaching diagram 310 with Black to play.

B2) **1...♔g5** 2 ♖f2 ♔g6 (2...♔g4 3 ♔c1! is diagram 310 again) 3 ♖f3 ♖e8 (3...♔g5 4 ♔a2 ♔g4 5 ♖b3 wins after 5...♖a8+ 6 ♖a3 ♖e8 7 ♖a6 or 5...♖e8 6 ♖b6 ♔f5 7 ♔a3 ♔e5 8 ♖a6 followed by b4) 4 ♔c2 ♖c8+ 5 ♔d3 ♖d8+ 6 ♔c4 ♖c8+ 7 ♔d5 ♖d8+ 8 ♔c6 ♖b8 9 b3 wins.

B3) **1...♔g3** 2 ♖f5 wins as in line B2 of diagram 310.

B4) **1...♖e8** (1...♖h8 is answered the same way) 2 ♖a6! ♔f5 3 ♔a2! ♖e3 (otherwise ♔a3 followed by b4 wins) 4 b3 ♖e1 (or 4...♔e5 5 ♔a3 ♔d5 6 ♔a4, followed by b4) 5 ♖h6 ♔e5 (or 5...♔g5 6 ♖c6) 6 ♔a3! ♖a1+ 7 ♔b4! ♖d1 8 ♔a4 and White succeeds in playing b4.

With White to play we have the following lines:

W1) **1 ♖a6** ♔f5 2 ♔a2 (2 ♔c2 ♔e5 3 ♔c3 ♔d5 4 b4 ♖c8+! 5 ♔b3 ♖c6! draws) ♔e5 3 ♔a3 ♔d5 4 b4 ♔c4! draws.

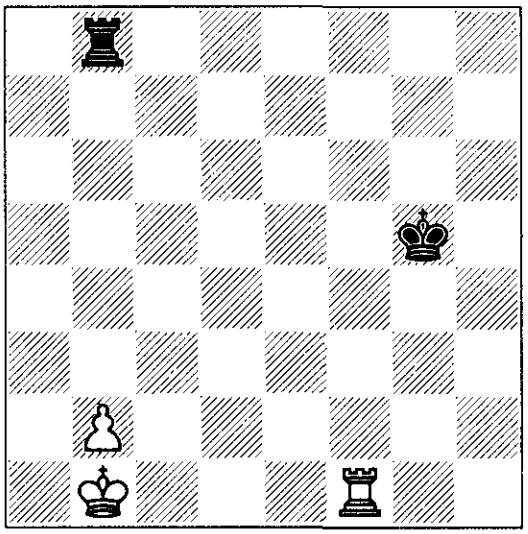
W2) **1 ♔c2** ♖c8+! 2 ♔d3 ♖b8! draws as in line W3 of diagram 310.

W3) **1 ♖f2** ♖h8! is diagram 311. Once again there is a danger of a circular argument, but it turns out that the cross-references between this diagram and the previous one reduce to a repetition of the position.

These three linked reciprocal zugzwang positions may be viewed in the context of corresponding squares. If we fix White's king on b1, his pawn on b2 and Black's king on g4 then a

correspondence exists between the positions of the two rooks. If Black is to draw he must meet ♖f2 by ...♖h8, ♖f6 by ...♖b8 and ♖f1/f7 by ...♖d8/e8. These are the only drawing positions with Black's king on the g-file. The ♖f2 v ♖h8 and ♖f6 v ♖b8 positions are reciprocal zugzwangs.

We consider one example in which Black's king is not on g4.



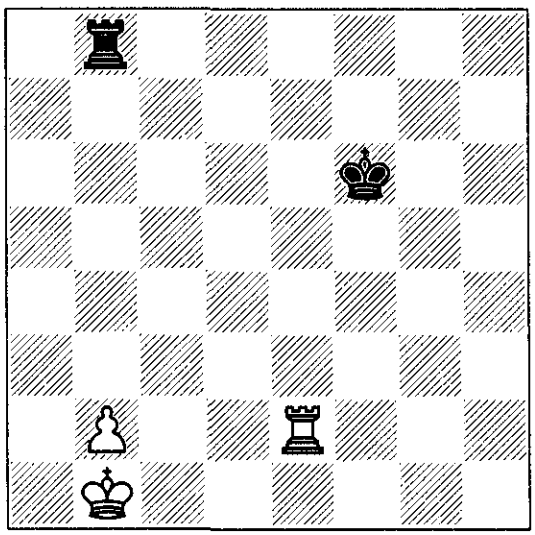
313 +/–

(**313**): White to play wins by 1 ♖f2 and now 1...♔g6 2 ♖f3 is line B2 in diagram 312, while 1...♔g4 2 ♔c1 is diagram 310. With Black to play, 1...♔g4 (1...♖h8 2 ♖f3 ♔g4 3 ♖f2! is diagram 311 and 1...♖e8 2 ♖f2 ♖b8 3 ♔c2 is line B1 of diagram 311) 2 ♖f6! is diagram 312.

Moving Black's rook to e8 doesn't help if White is to play because after 1 ♖f2! ♖b8 (1...♔g4 2 b3! as in line B2 of diagram 308) 2 ♔c2 we again reach line B1 of diagram 311. With the rook on e8, Black to move draws by 1...♔g4! (this is one of the positions mentioned above).

We can now see why Black always loses if his king is on any square apart from g4 and White is to play. In this case White always has one extra attacking possibility (either ♖f3 followed by b3, or ♖f5-a5) and he can either execute this plan or force Black into one of the above zugzwang positions. Black to move can only draw if 1...♔g4 leads to one of the above drawing positions.

Now we move on to the case in which White's rook occupies the e-file. This was winning with the pawn on the third rank, but here the general result is a draw. However, White can win under certain circumstances.



314 +/=

*Original*

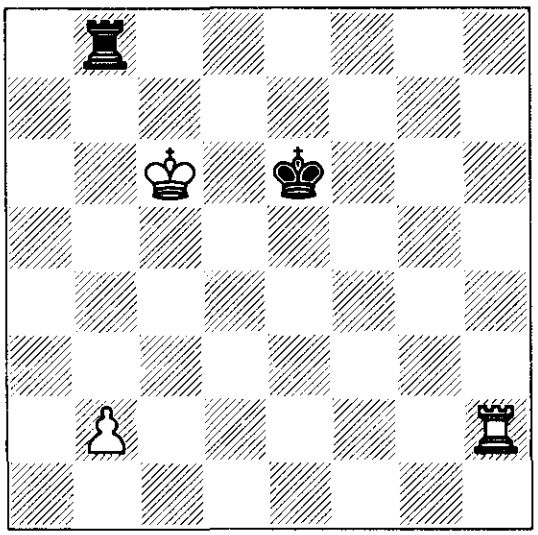
(**314**): Here White to play wins because he can force Black's king to the g-file. 1 ♔c2! (1 ♔a2 ♖a8+ 2 ♔b3? ♔f5! draws) ♖c8+ (we know that White wins if he can play b3) 2 ♔d3 ♖d8+ 3 ♔c4 ♖c8+ 4 ♔d5 ♖b8 5 ♔c5 (5 ♔c6? threatens nothing and allows Black to draw by 5...♔f5!, improving

his king position) ♖c8+ 6 ♔d6! ♖b8 (6...♖d8+ 7 ♔c7 ♖d4 8 ♔c6 forces b4) 7 ♖f2+ ♔g5 (7...♔g6 8 ♔c5 ♖c8+ 9 ♔d4 ♖d8+ 10 ♔c3 ♖c8+ 11 ♔d3 ♖d8+ 12 ♔c2 ♖c8+ 13 ♔b1 ♖b8 14 ♖f3 wins as in line B2 of diagram 312) 8 ♔c5! ♖c8+ 9 ♔b6 ♖b8+ 10 ♔a7 wins as in line B1 of diagram 310.

Black to play draws by 1...♔f5! 2 ♔c2 ♖c8+ 3 ♔d3 ♖d8+ 4 ♔c4 ♖c8+! 5 ♔d5 ♖d8+ 6 ♔c6 ♖b8! 7 ♔c5 ♖c8+! 8 ♔d6 ♖b8! and White cannot drive Black's king any further away.

If White's rook starts on e1, then his winning chances are even more remote. In this case Black's king needs to be as far back as f7 before White to play can win (see line 1 of the next diagram for more details; the basic idea is to play ♖e3 followed by b3).

If White's rook is on the d-file, there are winning chances only with a very favourable initial position. In particular, White's king needs to be in an active position while Black's must be poorly placed. In order to understand such situations, we must look at a preliminary zugzwang position.



315 +/–

*Original*

(**315**): Although this position is zugzwang with Black to move, it is not reciprocal zugzwang because White to play can lose a move. Indeed suppose that White is to move: 1 ♖h6+! (the obvious 1 ♖e2+? throws away the win after 1...♔f5! leading to diagram 314 with Black to play) ♔e7 (1...♔e5 2 ♖h5+! ♔e6 3 ♖b5 wins just as in diagram 273, because White will soon play b4 and it doesn't matter whether the pawn starts on b2 or b3) 2 ♖h7+! ♔e6 3 ♖h2! (3 ♖b7? ♖xb7! draws) transfers the move to Black and now he is forced to make a concession:

1) **3...♔e7** (3...♔e5 4 ♖h5+ as in the note to Black's first move) 4 ♔c7 ♖b3 5 ♖e2+ ♔f7 (5...♔f6 6 ♔d6 ♖b5 7 ♖f2+ ♔g5 8 ♔c6! ♖b8 9 ♔c5! wins as in diagram 314; by moving to f7, Black avoids being forced back to the g-file, but loses a different way) 6 ♔c6 (threat ♔c5) ♖b8 7 ♔c5 ♖c8+ 8 ♔d4 ♖d8+ 9 ♔c3 ♖c8+ 10 ♔d3 ♖d8+ 11 ♔c2 ♖c8+ 12 ♔b1 ♖b8 13 ♖e3 ♖d8 (13...♔f6 14 b3 followed by ♔b2 wins) 14 ♔c2 (14 b3? ♖d2! draws) ♖c8+ 15 ♔d3 ♖b8 16 ♔c3 ♖c8+ 17 ♔d4 ♖d8+ 18 ♔c5 ♖c8+ 19 ♔d6 ♖b8 20 b3 and wins.

2) **3...♖c8+** 4 ♔b7 ♖c4 5 ♔b6! ♔d6 (5...♔d7 6 ♖h5! transposes) 6 ♖h6+! ♔d7 (6...♔d5 7 ♔b5 ♖c5+ 8 ♔a4 followed by b4) 7 ♖h5! and now:

2a) **7...♖c6+** 8 ♔b5 ♖g6 (8...♖c8 9 ♖h7+! ♔d6 10 ♖b7 wins) 9 ♖c5! ♖g8 10 ♔a6! (not 10 b4? ♖b8+! 11 ♔a4 ♖a8+ 12 ♖a5 ♖h8 with a draw) ♖g4 (10...♖b8 11 ♖b5! ♖a8+ 12 ♔b7 ♖a4

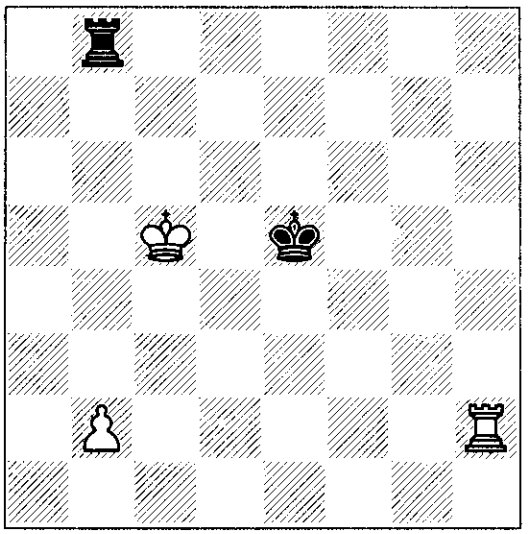
13 b3 wins, but not 13 b4? ♔d6! drawing – see line B1a of diagram 310) 11 b3 ♖h4 12 ♔b6 ♖b4+ 13 ♖b5! ♖h4 14 ♔b7, followed by b4, and wins.

2b) **7...♔d6** 8 b3 ♖c6+ 9 ♔b5 ♖c8 10 ♖h6+! ♔d7 11 ♖h7+! ♔d6 12 ♖b7 wins.

2c) **7...♖g4** (threat 8...♔c8! drawing) 8 ♖c5! ♖h4 9 b3 ♖b4+ 10 ♖b5! ♖h4 11 ♔b7 wins.

3) **3...♖b3** 4 ♖e2+ ♔f5 5 ♔c5! and Black cannot stop b4.

A similar situation can arise when Black's king is on e5.



316 +/–

*Original*

**(316):** White to play wins by 1 ♖e2+ and 2 b4, so we take Black to play: 1...♖c8+ (1...♔e6 2 ♖h6+ ♔d7 3 ♖h7+ ♔e6 4 b4 wins) 2 ♔b5! (2 ♔b6? ♔d5! 3 ♖d2+ ♔e5 4 ♔b7 ♖c4! draws, but not 2...♔d4? 3 ♖h4+! ♔d5 4 b4! and wins) ♖b8+ (2...♔d6 3 ♖h6+ ♔d7 4 ♖h7+ ♔d6 5 ♖b7 and 2...♔d5 3 ♖h5+ ♔d4 4 ♖h4+ ♔d5 5 b4 win much more quickly) 3 ♔c6! with the variations:

1) **3...♔e6** 4 ♖h6+! is diagram 315.

2) **3...♖c8+** 4 ♔b7 ♖c4 5 ♔b6! ♔d6 transposes to line 2 in the previous diagram.

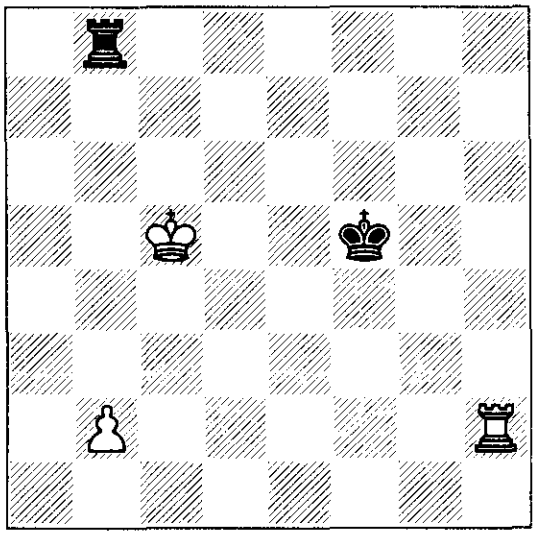
3) **3...♖b3** 4 ♔c5! ♔e6 5 ♖d2 (this position is zugzwang, because Black's king move to e7 makes his position worse; however White to play would still win by a totally different method, namely ♖d6+ and ♖b6) ♔e7 6 ♔c4 ♖b8 7 b4 ♖c8+ 8 ♔b3 ♖b8 9 ♖d4! winning as in diagram 242 (but only because Black's king is on e7!).

4) **3...♔f5** 4 ♖h5+! ♔e6 5 ♖b5 wins as in diagram 273.

5) **3...♔f6** 4 ♔c5 (having forced Black's king back one file, White has enough space to drive him even further back) ♖c8+ 5 ♔d6! ♖b8 6 ♖f2+ winning in the same way as in diagram 314.

However, readers should not assume that all such positions are winning for White. Not only does Black draw when his king is further up the board (e4, for example), he can often draw when his king is further away from White's pawn!

**(317):** The paradox is that moving Black's king from e5 to f5 turns diagram 316 into a draw: 1...♖c8+! 2 ♔b5 ♖b8+! 3 ♔c6 and now the only drawing moves are 3...♔g5 and 3...♔g4; it is incredible that Black needs to move his king even further away from the pawn, but in fact the draw is quite clear. White is deprived of the possibility of ♖h5+ and ♖b5, and by itself his active king cannot force the advance of the b-pawn. If White plays, for example, 3...♔g4 4 ♖d2 then 4...♔f3 followed

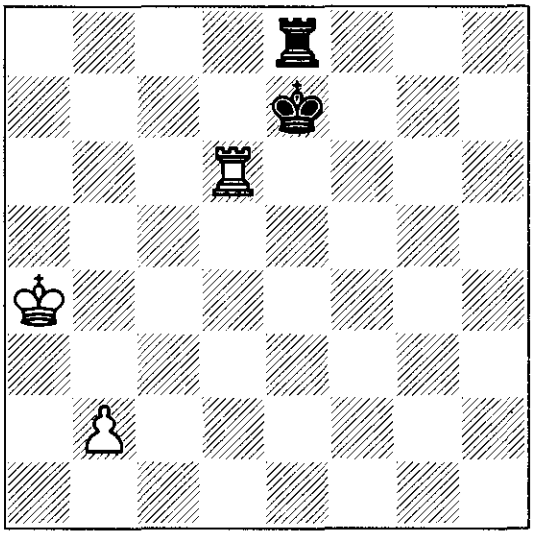


317 +/=

*Original*

by ...♔e3 enables Black to draw easily.

The following diagram is typical in that it eventually arrives at one of the above diagrams.



318 +/

*Original*

(**318**): White wins by 1 ♖d2! (1 ♖d4? and 1 ♖d3? are both met by 1...♖a8+! driving White's king back) ♖a8+ (after 1...♖h8 2 b4! White wins because Black's king is on e7 rather than e6) 2 ♔b5! (2 ♔b4? ♔e6! 3 b3 ♖b8+ is a draw because Black's king is only cut off by two files) and now:

1) **2...♖b8+** 3 ♔c6 ♔f6 (3...♔e6 4 ♖h2 is diagram 315) 4 ♔c7 ♖b5 5 ♔d6 (threat ♖f2+) ♔f7 6 ♖e2 ♖b8 7 ♔c5 and wins by retreating the king to b1, when White has time for ♖e3 and b3 (see the comments after diagram 314).

2) **2...♔e6** 3 ♖h2! (this is a very hard move to find, as it voluntarily gives up the d-file, but it is the only move to win; 3 b4? ♖b8+! draws as in diagram 241, and 3 ♖g2? ♖b8+! 4 ♔c6 ♔f5! 5 ♖h2 ♔g4 draws as in diagram 317) and now:

2a) **3...♖g8** 4 ♔c6! (threat b4) ♖b8 transposes to diagram 315.

2b) **3...♖b8+** 4 ♔c6 is diagram 315 again.

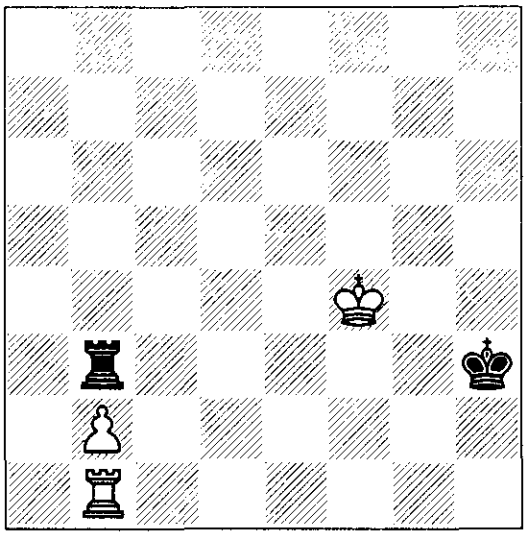
2c) **3...♖a2** 4 ♖c2 ♔d7 (4...♔d6 5 ♖c6+ and 6 b4) 5 ♔b6! (now the threat is ♖c7+ followed by b4) ♖a4 (5...♔d8 6 ♔b7 ♖a4 7 ♖c6 is similar) 6 ♖c5 ♖h4 (6...♖b4+ 7 ♖b5! ♖h4 8 b4 transposes to the main line) 7 b3 (threat ♖c4) ♖b4+ 8 ♖b5! ♖h4 9 b4 ♔c8 10 ♔a7! ♖h7+ 11 ♔a8! wins.

2d) **3...♔d5** 4 ♖h5+! ♔d6 (4...♔d4 5 ♖h4+ and 6 b4) 5 ♖h6+! ♔c7 6 ♖h7+! ♔d6 7 ♖b7! and the pawn advances.

### 2.6.3: Other situations

Most analysts have concentrated on the relatively well-defined situations of sections 2.6.1 and 2.6.2, so there is little to add here. There are three positions of reciprocal zugzwang which I

have not mentioned so far. The first is W♔e1, ♖a2, ♙b2 v B♔g2, ♖f2; this one is not very interesting because it belongs to the family which includes diagrams 227, 270 and 297, and the analysis is similar. The other two deserve a mention.



319 =/–

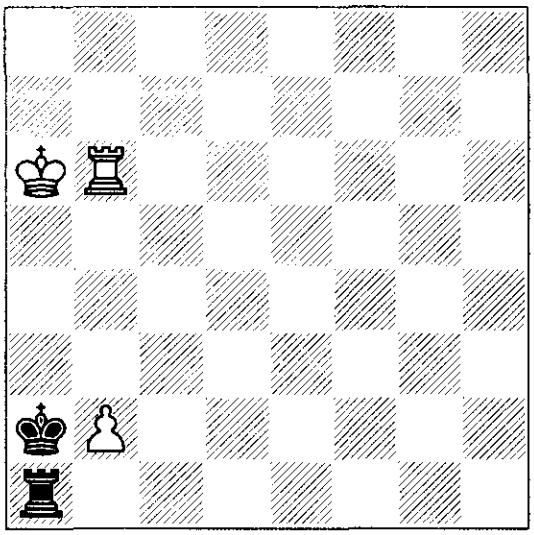
*Original*

**(319):** With Black to play:

B1) **1...♖b4+** 2 ♔e5! (after 2 ♔f5 ♖b3 White can only win by 3 ♔f4!) ♔g4 3 b3 ♔g5 4 ♔d5 ♔f6 5 ♔c5 ♖e4 (5...♖b8 6 b4 ♔e7 7 ♔c6 ♔d8 8 ♖d1+ ♔e7 9 b5 wins) 6 b4 ♖e5+ (6...♔e7 7 ♔c6 ♔d8 8 ♔b7! ♖e7+ 9 ♔b8! wins) 7 ♔b6 ♖e6+ 8 ♔a5 ♔e7 9 b5 ♔d7 10 ♖c1! and b6 wins.

B2) **1...♔g2** 2 ♔e4 ♔g3 3 ♔d4 ♔f4 4 ♔c4! ♖e3 (4...♖b8 5 b4 ♔e5 6 ♔c5! ♔e6 7 ♔c6 wins) 5 b4 ♔e5 6 b5 ♔d6 7 b6! ♖e8 8 ♔b5! and wins.

White to move has only one plan, namely to play his king to c4: 1 ♔e4 (1 ♔f5 ♔g3 2 ♔e4 ♔g4! transposes) ♔g4! 2 ♔d5 ♔f5! 3 ♔c4 (3 ♖f1+ ♔g4! 4 ♖f2 ♔g3 5 ♖c2 ♔f4 6 ♔c4 ♖b8! 7 b4 ♔e5! draws after 8 ♖d2 ♖c8+! 9 ♔b3 ♖b8!) ♖b8! 4 b4 ♔e6! (4...♔e5? 5 ♔c5! wins as in line B2) 5 ♖d1 ♖c8+! 6 ♔b3 ♖b8! is drawn by diagram 241.



320 =/–

*Original*

**(320):** Black to play may try:

B1) **1...♖h1** 2 b4 ♔b3 3 b5! ♖a1+ (3...♔b4 4 ♖g6) 4 ♔b7 ♔b4 (4...♖a5 5 ♔c6! ♔b4 6 ♖b8 wins) 5 ♖a6! ♖h1 (5...♖b1 6 ♖h6, followed by b6 with an easy win) 6 b6! ♖h7+ (6...♔b5 7 ♔a7!) 7 ♔a8! ♔b5 (7...♖h6 8 ♔a7 ♔b5 9 ♖a1 wins) 8 b7! ♖h8+ 9 ♔a7! and wins.

B2) **1...♖b1** 2 b4! ♔b3 3 b5! ♔a4 (3...♖a1+ is line B1) 4 ♖b8 and the way is clear for the white pawn to advance.

B3) **1...♔b1+** 2 ♔b7! ♔c2 3 b4! ♔b3 4 b5! transposes to line B1.

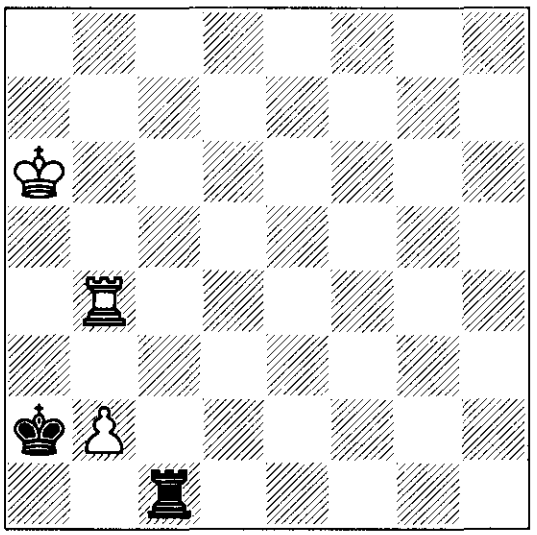
It is more surprising that White to play cannot win:

W1) **1 b4** ♔b3+! 2 ♔b7 (2 ♔b5 ♖a8 3 ♔c6 ♔c4 4 b5 ♖h8 draws) ♔c4 3 b5 ♖h1 with a clear draw.

W2) **1 ♔a7** ♖h1 2 b4 ♔b3! (or 2...♔a3 3 ♔a6! winning after 3...♔a4 4 b5! or 3...♖a1 4 ♔b5 ♖h1 5 ♔a5 ♔b3 6 ♖g6) 3 b5 (3 ♔a6 ♖a1+ is line W1) ♔b4! (3...♔c4 4 ♖b8! ♖a1+ 5 ♔b6! ♖h1 6 ♖g8 wins) 4 ♖b8 ♖a1+ 5 ♔b6 ♖h1 draws.

W3) **1 ♖b5** ♔b1+! 2 ♔b6 ♔c2 3 b4 ♔b3 with an obvious draw.

It is possible to create a tricky endgame study from this zugzwang.



321 +/

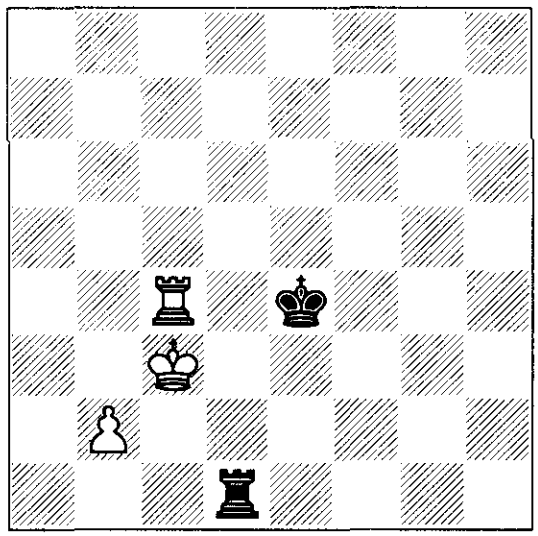
*Original*

(**321**): The possibilities are:

1) **1 ♖b7?** (1 ♖b6? ♖a1! puts White in zugzwang) ♖c6+! 2 ♔a5 (2 ♔b5 ♖c8! 3 b4 ♔b3! draws, but Black should avoid 3...♔a3? 4 ♖a7+! ♔b3 5 ♔a5! winning) ♖c8 3 b4 ♖a8+! 4 ♔b6 ♔b3 5 b5 ♔a4! is the reciprocal zugzwang of diagram 214 with White to move.

2) **1 ♖b8!** ♖a1 (the threat was 2 b4 and 1...♖c6+ 2 ♔b5 ♖h6 3 b4 ♔b3 4 ♔a5! wins) 2 ♖b6! (for other moves see diagram 320 with White to play) and Black is in zugzwang.

We finish with the longest win in the ending of ♖+b♙ v ♖, indeed the longest win in the whole ending of ♖+♙ v ♖.



322 /–

*Original*

(**322**): With best play White can promote his pawn in 60 moves. In the main line the pawn remains on b2 until move 32. Black has the following alternatives:

1) **1...♔d5** 2 ♔b4! ♖a1 (or 2...♖d2 3 b3! ♔d6 4 ♔a4 ♔d5 5 ♖c8 and White can advance the pawn) 3 ♔b5 ♖a8 4 ♖c5+! ♔d6 5 ♖c6+! ♔d7 6 b4! ♖b8+ 7 ♖b6! ♖h8 8 ♔a6 ♔c7 9 ♖b7+! ♔c8 10 b5 wins.

2) **1...♔e5** (allowing the rook to return to the first rank immediately) 2 ♖c5+! (not 2 b4? ♔d5 3 ♖c5+ ♔d6! and after 4 ♔c4 Black can and must exchange rooks, nor 2 ♔b4? ♖d8! 3 ♖c5+ ♔d6 with an easy draw) ♔d6 (2...♔e6 3 ♔c4! wins after 3...♖d8 4 b4!, or 3...♔d6 4 ♔b5 followed by b4) 3 ♔b4! (threat ♔b5 intending b4) and now:

2a) **3...♖d2** 4 b3! ♖d3 5 ♖c8! (not 5 ♖c1? ♖h3 6 ♔a4 ♖h8! 7 b4 ♖a8+! 8 ♔b3 ♖b8!, drawing as in diagram 241) ♔d7 (now that White occupies the eighth rank, the line 5...♖h3 6 ♔a4! ♖h7 7 b4 ♖a7+ 8 ♔b5! wins for White) 6 ♖c4! (6 ♖c1? ♖h3 7 ♔a4 ♖h8! 8 b4 ♖a8+! 9 ♔b3 ♖c8 draws) ♔e6 (6...♖h3 7 ♔a4! ♖h8 8 b4! ♖a8+ 9 ♔b5! ♔d6 10 ♔b6 wins; when White's rook defends the pawn he can meet the check on a8 by ♔b5) 7 ♖c3! (7 ♔a4? ♖d8! 8 b4 ♔d5! dislodges the rook and draws after 9 ♖c5+ ♔d6! 10 ♖c1 ♖a8+!) ♖d8 (7...♖d1 8 ♔b5) 8 ♖e3+! and a three-file cut-off wins with a pawn on b3.

2b) **3...♖b1** 4 ♖c2! (again intending ♔b5 and b4) ♖h1 5 ♔b5! (5 ♔a5? ♖h8! draws) ♖h5+ (5...♖h8 6 ♖c6+! ♔d7 7 b4! wins as in line 1) 6 ♔b6! (after 6 ♔a6 ♖h4 White can only maintain the win by 7 ♔b5!) ♖h8 (6...♖h4 7 ♖c6+ wins after 7...♔d7 8 ♔b7 ♖g4 9 ♖b6 or 7...♔d5 8 ♔b5 ♖g4 9 ♖b6, followed by b4) 7 ♖d2+! ♔e5 (7...♔e6 8 ♔c7 ♖h4 9 b3 wins much more easily because 9...♖b4 may be met by 10 ♖d6+! ♔e5 11 ♖b6!) 8 ♔b7 (threat b4; 8 ♔c7 is just as good) ♖h4 (after 8...♖h1 White may transpose by 9 ♔c6 ♖c1+ 10 ♔b5! ♖c8, although in this case there is a much faster win by 9 ♖c2) 9 ♔c6! ♖c4+ (once again 9...♖a4 10 ♔b5 ♖a8 11 ♖h2! is more or less a transposition, but 10 ♖c2 is quicker) 10 ♔b5! ♖c8 11 ♖h2! and we have reached the position after the first move in diagram 316. We give the remaining moves of the main line: 11...♖b8+ 12 ♔c6! ♔e6 13 ♖h6+! ♔e7 14 ♖h7+! ♔e6 15 ♖h2! ♔e7 16 ♔c7 ♖b3 17 ♖e2+ ♔f7 18 ♔c6 ♖b8 19 ♔c5 ♖c8+ 20 ♔d4 ♖d8+ 21 ♔c3 ♖c8+ 22 ♔d3 ♖d8+ 23 ♔c2 ♖c8+ 24 ♔b1 ♖b8 25 ♖e3 ♖d8 26 ♔c2 ♖c8+ 27 ♔d3 ♖b8 28 ♔c3 ♖c8+ 29 ♔d4 ♖d8+ 30 ♔c5 ♖c8+ 31 ♔d6 ♖b8 32 b3 ♖b5 33 ♔c6 ♖b8 34 ♖d3 ♔f8 35 ♔c5 ♖c8+ 36 ♔b5 ♔e7 37 b4 ♖b8+ 38 ♔a4 ♖a8+ 39 ♔b3 ♖b8 40 ♖d4 ♔e6 41 ♔c4! ♔e5 42 ♖d5+ ♔e6 43 b5 ♖c8+ 44 ♖c5! ♖b8 45 ♖c6+ ♔d7 46 ♔c5 ♖h8 47 ♔b6 ♖b8+ 48 ♔a6 ♖a8+ 49 ♔b7 ♖a5 50 b6 ♖b5 51 ♖h6 ♖b1 52 ♔b8 ♖g1 53 b7 ♖a1 54 ♖h4 ♖a2 55 ♖d4+ ♔e7 56 ♔c7 ♖c2+ 57 ♔b6 ♖b2+ 58 ♔a6 ♖b1 59 ♖a4 followed by 60 ♔a7.

There are 14 positions of reciprocal zugzwang in the ending of ♖+♙b2 v ♖. Three are mentioned in diagram 308, two in diagram 305 and one just before diagram 319. The other eight are diagrams 303, 304, 307, 310, 311, 312, 319 and 320.

**Practical tips:** Diagrams 299 and 300 are the most useful in practice, and players should be aware that positions such as diagrams 310-312 exist, although it would be hard to justify learning all the details!

# 3 ♖+c♙ v ♖

We can move relatively quickly through this chapter. Whereas there were many major differences between the a-pawn and the b-pawn, far fewer new ideas appear when we progress to the c-pawn. In fact only two major new points arise. Firstly, White can sometimes win when Black's king is in front of the pawn. This may happen if Black's rook is badly placed in the starting position. The second point is that Black's king may be on either side of the pawn. For example, consider the Lucena position. With the pawn on b7 and king on b8, Black's king can only be to the right of the pawn. With a pawn on c7 and king on c8 Black's king may be on either a7 or e7. This becomes relevant if, for example, we add a white rook on b1 and a black rook on h2. When Black's king is on a7, White's king has no defence to the lateral checks from the rook and Black to play draws by 1...♖h8+. On the other hand if we move Black's king to e7 he loses immediately. When Black's king is to the left of a c-pawn we say that it is on the short side of the pawn; the right-hand side is called the long side of the pawn. Usually it is an advantage for Black's king to be on the short side of the pawn, so that the king doesn't obstruct long-range checks from the rook. However, there are a few situations in which having Black's king on the a-file can be a weakness, as mating threats are possible.

## 3.1: Pawn on the seventh rank

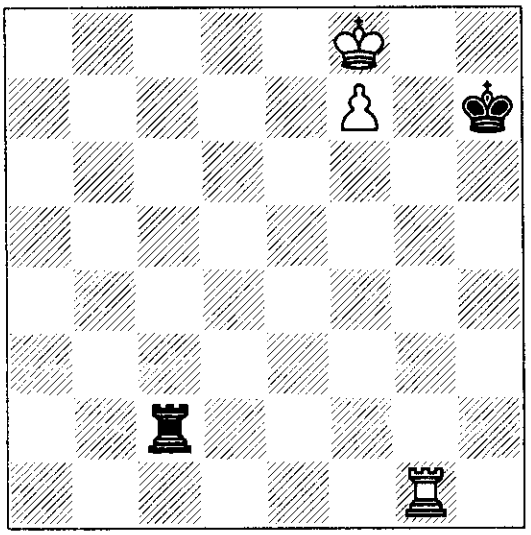
As usual, there is a further division:


3.1.1: White's king is in front of the pawn 194
3.1.2: White's rook is in front of the pawn 196
3.1.3: White's rook defends the pawn from the side 198


### 3.1.1: White's king is in front of the pawn

If Black's king is on the long side of the pawn then the situation is the same as for a b-pawn, namely that White always wins. Therefore we need only examine the new possibility that Black's king is on the short side of the pawn.

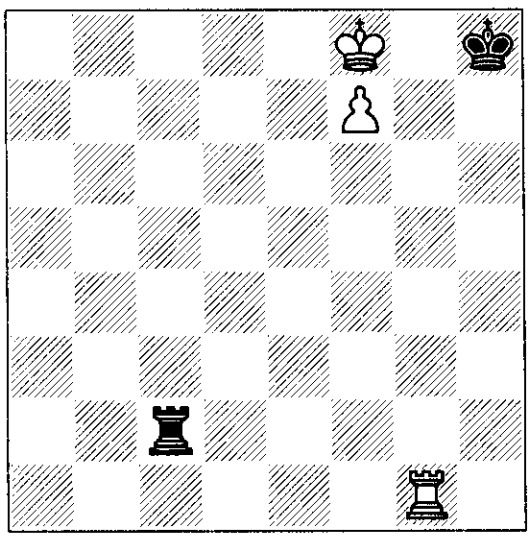
**(323):** It is in Black's favour to have his rook far away from White's king, so this case is marginal. White to play wins by 1 ♖h1+ ♔g6 2 ♔g8, while Black to play draws by 1...♖c8+! 2 ♔e7 ♖c7+! 3 ♔e6 (3 ♔f6 ♖c6+! 4



323 +/=

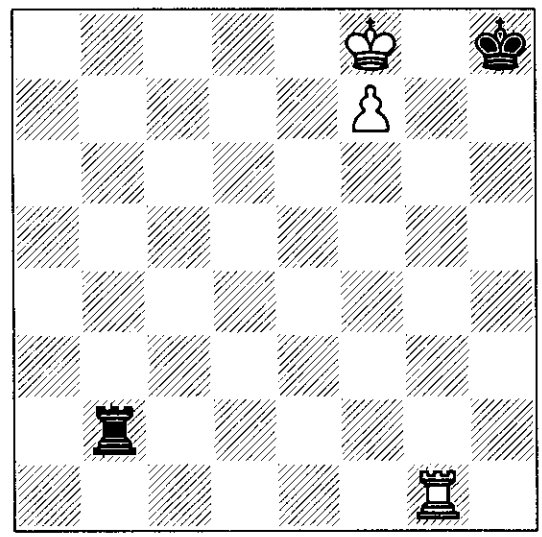
♔e5 ♖c8! draws, but not 4...♖c5+? 5 ♔d6! winning after 5...♖f5 6 ♔e7 or 5...♖c8 6 ♖e1! ♔g7 7 ♖e8!) ♖c8! 4 ♔d7 ♖a8 5 ♖a1 ♖b8! (5...♖f8? 6 ♔e7 wins) and Black threatens to play ...♔g7, so White cannot make progress.

If Black's king is on h8 instead of h7, then Black loses if his rook is on the c-file.



324 +/–

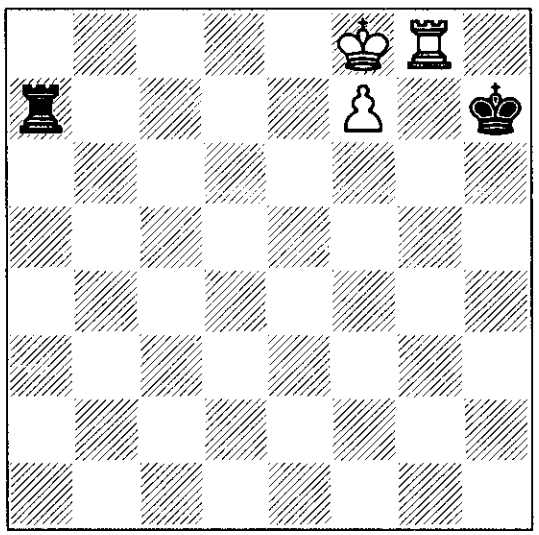
**(324):** After 1...♖c8+ 2 ♔e7! ♖c7+ 3 ♔f6 ♖c6+ 4 ♔e5 ♖c8 (4...♖c5+ 5 ♔d6 ♖c8 6 ♖e1 wins; after the text-move, the continuation 5 ♖c1 ♖a8 is not dangerous for Black, because on 6 ♔f6 Black can start checking) 5 ♖g6! (this move was not available when Black's king was on h7; the threat is 6 ♖c6 followed by ♔f6, when the rook on the sixth rank shields the king from checks) ♔h7 (there is no defence; 5...♖a8 is met by 6 ♖a6!) 6 ♖c6! ♖a8 7 ♔f6 ♖b8 8 ♖e6 followed by ♖e8, and the pawn promotes.



325 +/=

**(325):** Black to play draws if his rook starts on the a-file or the b-file: 1...♖b8+! 2 ♔e7 ♖b7+! 3 ♔f6 (3 ♔e6 ♖b6+ 4 ♔d5 ♖b8 5 ♔d6 ♔h7 draws) ♖b6+! 4 ♔f5 (4 ♔e5 ♖b5+! 5 ♔d6 ♖b8! 6 ♖e1 ♔g7! 7 ♖e8 ♖b6+! followed by 8...♔xf7; this line shows why the rook is better on the b-file than the c-file) ♖b5+! (not 4...♖b8? 5 ♖g6! and White wins) 5 ♔g6 ♖b6+! 6 ♔h5 ♖b5+ 7 ♔h6 ♖b6+! (7...♖b8? 8 ♖g6, followed by ♖e6 and ♖e8) 8 ♖g6 and Black can draw by the simple 8...♖xg6+ or the flamboyant 8...♖f6.

White wins if his rook starts on the favourable square g6, even if Black's rook is on the a-file.

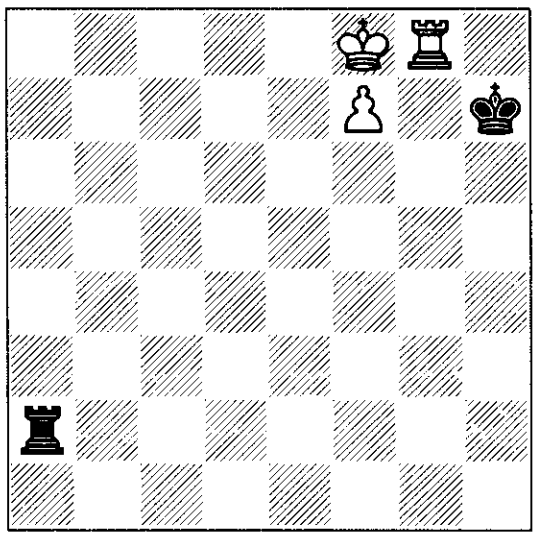


326 +/=

(**326**): Black to play can draw by 1...♖a8+ and 2...♖xg8, so we take White to move. 1 ♖g7+! (after 1 ♖g1? ♖a8+! Black draws as in diagram 323) ♔h8 (1...♔h6 2 ♔g8) 2 ♖g6! (the key square, just as in diagram 324) ♖a8+ (2...♔h7 3 ♖f6 wins after 3...♖a1 4 ♖f2 ♖e1 5 ♖h2+ ♔g6 6 ♔g8 or 3...♖a8+ 4 ♔e7! ♖a7+ 5 ♔e6 ♖a6+ 6 ♔e5 ♖a5+ 7 ♔d4 ♖a4+ 8 ♔c5) 3 ♔e7! ♖a7+ 4 ♔f6 ♖a6+ 5 ♔f5 (5 ♔g5? ♖xg6+! draws) ♖a5+ (5...♖a8 6 ♖a6 followed by 7 ♔f6 wins) 6 ♔f4 ♖a8 (6...♖a4+ 7 ♔g5 ♖a5+ 8 ♔h6 ♖a8 9 ♖e6) 7 ♔g5 ♔h7 8 ♖a6! ♖b8 9 ♔f6, followed by ♖e6-e8 winning.

Readers should be aware that it is sometimes necessary to promote to a rook in this type of position.

(**327**): White can win by 1 ♖g7+ ♔h8 2 ♖g6, just as in the previous diagram, but there is an alternative road to victory by 1 ♔e7 ♖e2+ (1...♖a7+ 2 ♔e6 ♖a6+ 3 ♔d5 is easier) 2 ♔d6 ♖d2+ 3 ♔e5 ♖e2+ 4 ♔d4 ♖f2 5 f8♖! (but not 5 f8♕? ♖d2+! with perpetual check along the second rank) and there is no stalemate so the extra material is decisive.

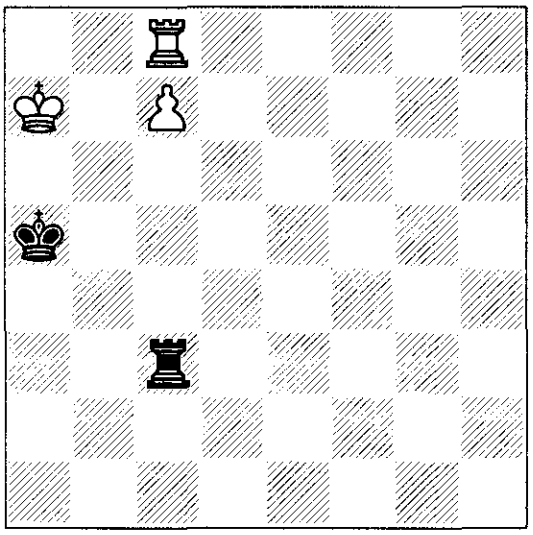


327 +/=

### 3.1.2: White's rook is in front of the pawn

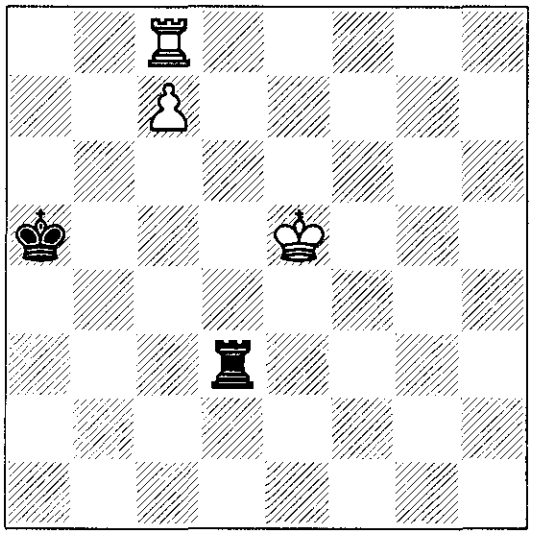
Most of the results in section 2.1.2 carry over to this situation, so we need only emphasize the differences. First of all, the kings might be on the short side of the pawn.

(**328**): This is basically the same as diagram 180. White to play wins if Black's rook is on c3, c4 or c5, but the position is drawn if the rook starts on c1, c2 or c6. Suppose White is to play in the diagram position: 1 ♔b7! ♖b3+ 2 ♔c6! ♖c3+ 3 ♔d6 (3 ♔d5? ♔b6 draws) ♖d3+ 4 ♔c5 ♖c3+ 5 ♔d4 wins for White, but if Black's rook started on c2 then it would not be attacked after 5 ♔d4 and Black could draw by continuing 5...♔b6.



328 +/=

*Minev, 1985*

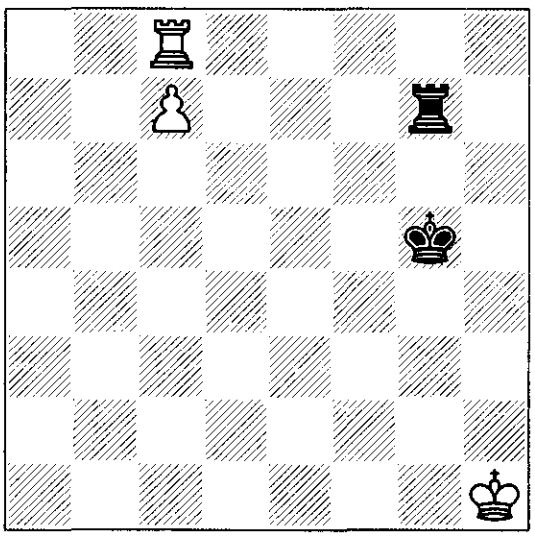


329 +/–

*Original*

(**329**): Black can only try 1...♔b6, but White has a tactical win by 2 ♖d8! ♖e3+ 3 ♔d6! ♖d3+ 4 ♔e7 ♖e3+ 5 ♔d7! ♖d3+ 6 ♔c8! ♖c3 7 ♖d6+ ♔a7 8 ♔d8 ♔b7 9 ♖d7 ♔a8 (setting a little trap, but it is easy to avoid) 10 ♖d1 (of course White cannot promote) ♔b7 11 ♖b1+ ♔a7 and now White can even promote to a queen.

There are eight positions of reciprocal zugzwang with W♖c8 and W♙c7. The reciprocal zugzwang from diagram 11 remains reciprocal zugzwang when it is shifted two files to the left (W♔d7, ♖f8, ♙f7 v B♔f5, ♖f6), but now there is a second reciprocal zugzwang obtained by moving White's king from d7 to h7, in effect reflecting the position. Diagram 182 shifted to the right (W♔g4, ♖c8, ♙c7 v B♔f6, ♖f7, discovered by Herberg in 1942) remains reciprocal zugzwang, but the situation with diagrams 183 and 184 is altered. The single reciprocal zugzwang of diagram 183 expands into a family of five related zugzwangs.



330 =/–

*Gurgenidze (version)*
*Shakhmaty, 1972*

(**330**): In any position with the white king on the h-file and the black king on the g-file, both sides have limited freedom. Black cannot check on h7 because White's king reaches the f-file with gain of tempo. On the other hand if White moves to the g-file then Black can play ...♔f5/f4+ and ...♖f7, when White can never win because

putting his king on the e-file would allow ...♖e7+ and ...♔e6-d7. Therefore the white king must stay on the h-file and Black's must stay on the g-file. It follows that W♔h3 v B♔g5 is reciprocal zugzwang and the other four zugzwangs are all derived from this one. In the b-pawn situation many of these positions were wins for White, even with White to move, because White could triangulate with his king on the h-file. Here there is no i-file, so this option doesn't exist.

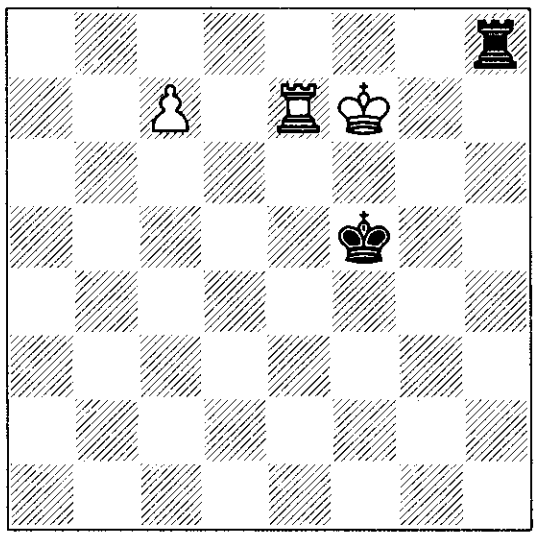
Suppose Black is to play. After 1...♔g4 (1...♖h7+ 2 ♔g2 ♖g7 3 ♔f3 ♖f7+ 4 ♔e4 ♔f6 5 ♔d5 loses at once, while 1...♔g6 2 ♔h2! ♔g5 transposes to the main line) 2 ♔h2! ♔g5 (2...♖h7+ 3 ♔g2 ♖g7 4 ♔f2 ♖f7+ 5 ♔e3 ♔f5 6 ♔d4 wins) 3 ♔h3 ♔g6 4 ♔g4 (when White's king is far enough forward he can abandon the tempo play; the fact that this move wins means that W♔h4 v B♔g6 is not reciprocal zugzwang) ♔f6+ 5 ♔f4 ♖f7 6 ♔e4 ♖e7+ 7 ♔d5! and White wins because ...♔e6 is prevented.

With White to play 1 ♔g2 (1 ♔h2 ♔g4 2 ♔g2 is the same) ♔f5+ 2 ♔f3 ♖f7! 3 ♔e3 (3 ♔g3 ♖g7+!) ♖e7+! 4 ♔d4 ♔e6! draws.

For the record the other four reciprocal zugzwang positions are W♔h1 v B♔g3, W♔h2 v B♔g4, W♔h2 v B♔g6 and W♔h3 v B♔g5.

### 3.1.3: White's rook defends the pawn from the side

This is the most interesting case, although many of the results duplicate the analysis from section 2.1.4. The reciprocal zugzwang from diagram 22 is maintained when it is shifted by two files (W♔e7, ♖d7, ♙c7 v B♔e5, ♖c8) and, thanks to the extra space on the short side, there is a symmetrical position (W♔a7, ♖b7, ♙c7 v B♔a5, ♖c8). However, diagram 25 is changed by the two-file shift.



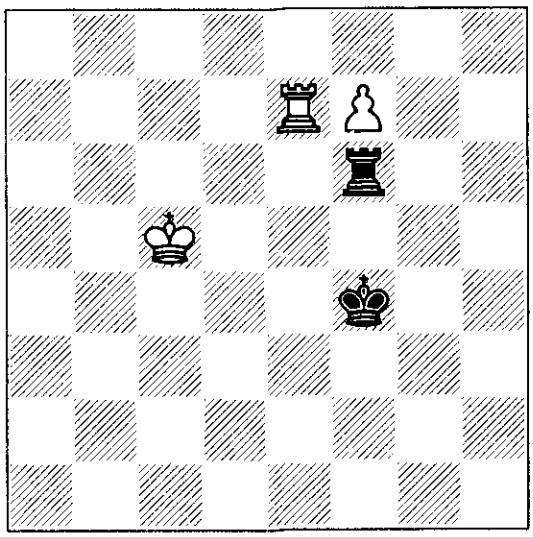
331 =/–

*Original*

**(331):** The difference is that Black doesn't have a waiting move with his rook. Black to play loses after 1...♖c8 2 ♖d7! (not 2 ♔g7? ♖a8! and now 3 ♔f7 ♖h8! puts White in zugzwang) ♔e5 (2...♖h8 3 ♖d5+ ♔e4 4 ♖c5 wins) 3 ♔e7! (this is the reciprocal zugzwang derived from diagram 22, as mentioned above) ♖h8 4 ♖d1 ♖h7+ 5 ♔d8! ♖h8+ 6 ♔d7! ♖h7+ 7 ♔c6 and the pawn promotes. White to play cannot win, for example 1 ♔g7 ♖c8 or 1 ♖d7 ♔e5! 2 ♔e7 ♖h7+.

The reciprocal zugzwangs of diagrams 187 and 188 are maintained when they are shifted to the right by

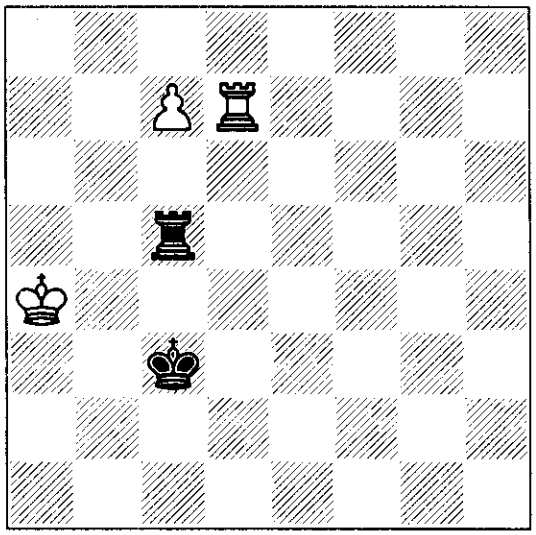
one square (W♔e5, ♖b7, ♙c7 v B♔c5, ♖c6 and W♔e4, ♖b7, ♙c7 v B♔c3, ♖c5). The analysis is identical. However, diagrams 190 and 191 are no longer won. The reason is that with the g-pawn White employed the two rook manoeuvres ♖h7-h1-f1-f7 and ♖f7-f1-h1-h7, each time gaining a tempo. With an f-pawn the first manoeuvre still works, but the second doesn't because Black can move his king to the h-file.



332 =/=

(**332**): This is diagram 190 shifted to the left. It is drawn because after 1 ♖e1 ♔g5 2 ♖g1+ Black is not forced to return to the f-file.

As we have mentioned before in this chapter, the extra space on the short side of the pawn allows certain positions to be reflected about the c-file. One of the two reciprocal zugzwangs mentioned above may be reflected to give W♔a5, ♖d7, ♙c7 v B♔c5, ♖c6, which is also reciprocal zugzwang. If the other is reflected we obtain the following position.



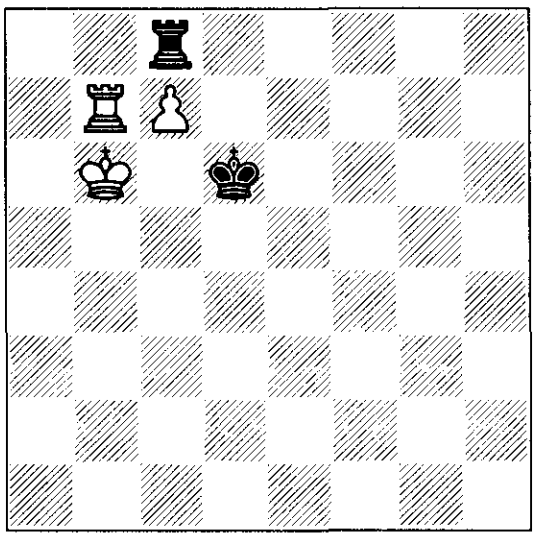
333 +/–

*Original*

(**333**): Now White wins, even with the move. The reason is that the extra space on the long side allows White to lose a tempo with his rook: 1 ♖h7 ♔c4 (1...♔d4 2 ♔b4 ♖c1 3 ♔b5 ♔d5 4 ♔b6 ♖b1+ 5 ♔a7 and the king hides on c8) 2 ♖g7 ♖c6 (2...♔d4 3 ♔b4 is the previous note, while 2...♔c3 3 ♖d7 transfers the move to Black) 3 ♔a5! ♔c5 (3...♔d5 4 ♔b5! wins) 4 ♖d7! (reaching the reciprocal zugzwang mentioned above) ♔c4 5 ♖d1 ♔b3 6 ♖b1+ ♔c2 7 ♖b7! ♔d3 8 ♔b5! ♖c1 9 ♔b6 wins.

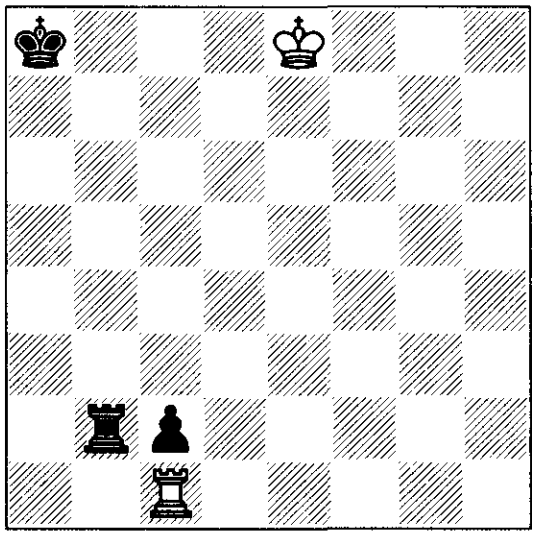
The next position has no counterpart with a b-pawn (if it is shifted to the left it is a draw whoever plays first).

(**334**): Black to move loses after 1...♔e6 2 ♔c6! (not 2 ♖b8? ♔d7! 3 ♖b7 ♔d6 and White is in zugzwang) followed by ♖c8, or 1...♔d7 2 ♖a7! (this is a second reciprocal zugzwang) ♖e8 (2...♔d6 3 ♖a1) 3 ♖a1 ♖h8 4 ♔b7 followed by ♖d1+. With White to play, 1 ♖a7 ♔d7! leaves him with nothing better than 2 ♖b7.



334 =/–

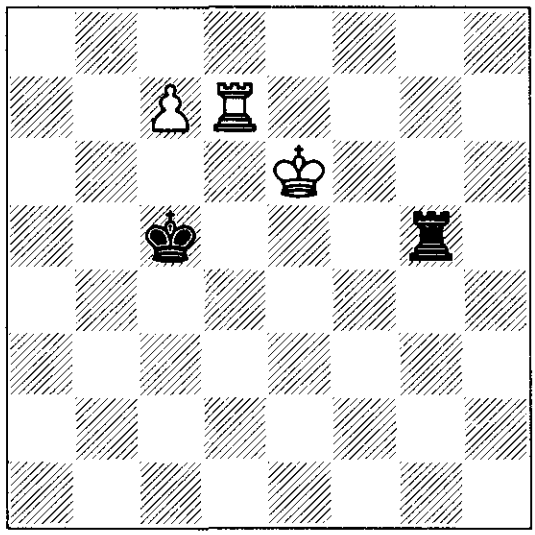
This position of reciprocal zugzwang is one of a family of six. The other five may be derived by moving the kings down the board. For example, take W♔b1 v B♔d1. Black cannot move his rook because of ♖b8, and if White plays ♖a7 Black may reply with ...♔d2. In effect only the kings can move and play is governed by the opposition.



335 =/=

*Vancura, 1926*
*28 Rijen*

**(335):** We take White to move (the case of Black to move is similar). The position is based on the reciprocal zugzwangs mentioned above. White should continue 1 ♔e7! (not 1 ♔d7? ♔b7! nor 1 ♔d8? ♔b8!) ♔a7 (1...♔b7 2 ♔d7!) 2 ♔e6! (it might appear that Black has the distant opposition, and therefore White should lose, but White can draw provided he avoids putting his king on the d-file) ♔a6 3 ♔e5! ♔a5 4 ♔e4! ♔a4 5 ♔e3! ♔b3 (5...♔a3 6 ♔d2 ♔b3 7 ♔d3 is the same; Black cannot move his king to b2, so at this point the opposition breaks down) 6 ♔d3! ♖a2 7 ♔d2! and draws.



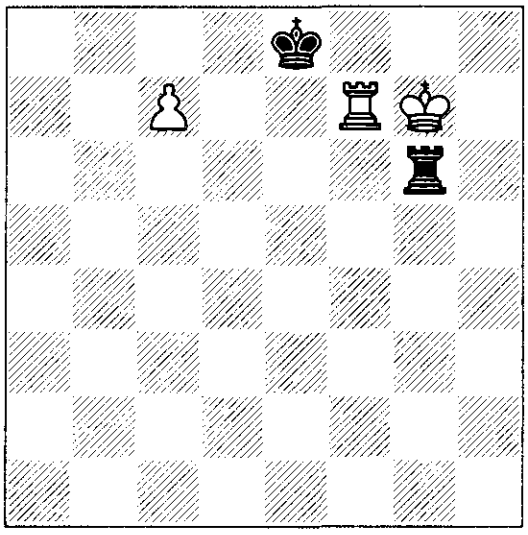
336 /–

*Original*

**(336):** White wins by 1...♖g6+ 2 ♔f7! (2 ♔e7? ♖g8! and 2 ♔f5? ♖c6! draw) ♖c6 3 ♔e7 (threat ♔d8) ♔b6 4 ♔d8! ♖h6 5 ♔c8! (White cannot promote, except to a knight, and after 5 ♖e7 ♖h8+! 6 ♔d7 ♔b7! or 5 ♖d1 ♖h8+! 6 ♔d7 ♖h7+! 7 ♔d6 ♖h6+ the position is drawn) ♖h8+ (5...♔a7 6 ♖d8 ♖h7 7 ♖e8 followed by ♔d8

wins) 6 ♖d8! ♖h7 7 ♖d6+! ♔a7 8 ♖c6 ♖h8+ 9 ♔d7 ♖h7+ 10 ♔d6 ♖h6+ 11 ♔d5 ♖h5+ 12 ♔e4 and White wins by approaching the rook with his king.

If Black's rook starts on h5 then he can draw by 1...♖h6+! 2 ♔e7 (2 ♔f7 ♖h8!) ♖h7+ 3 ♔f6 ♖h6+ 4 ♔f7 (if the king moves to the g-file, then ...♖c6 draws) ♖h8! followed by ...♖c8 winning the pawn.



337 +/

*Original*

**(337):** White to play wins by 1 ♔h7! (not 1 ♔h8?? ♔xf7) ♖c6 2 ♖g7! (2 ♔g7? ♖c1 draws) with a reciprocal zugzwang. If it were White to play, he could not win because Black meets ♔h8 or ♔g8 by ...♖c1, only returning to c6 in response to ♔h7. However, Black is to play and White wins after 2...♖c1 3 ♔g6 ♖c6+ 4 ♔f5 ♖c1 5 ♔e5 ♖c6 6 ♔d5 ♖c1 7 ♔d6 (threat ♖g8+) ♖d1+ 8 ♔c6 ♖c1+ 9 ♔b7 ♖b1+ 10 ♔c8 with the Lucena position.

There are 24 reciprocal zugzwangs in the ending of ♖+♙c7 v ♖. Of these, 22 may be found under diagrams 330, 331, 332, 333, 334 and 337. The final two are W♔d6, ♖b6, ♙c7 v B♔c8, ♖a8 and W♔c6, ♖b6, ♙c7 v B♔c8, ♖a6.

**Practical tips:** Diagrams 323-327 have the greatest practical importance. The other sections are so similar to those for the b-pawn that it is hardly necessary to expend special effort on learning the analysis.

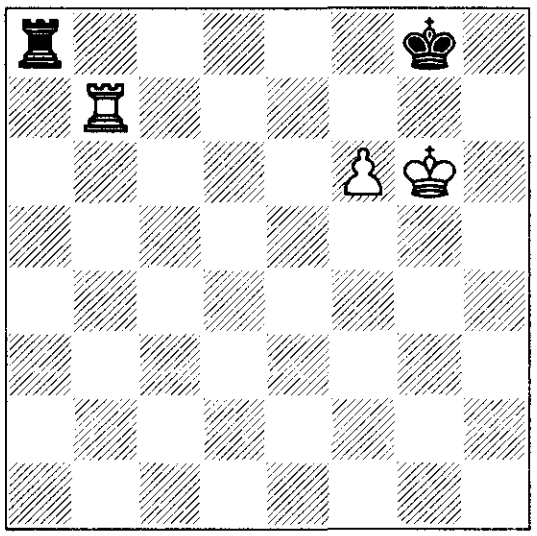
## 3.2: Pawn on the sixth rank

3.2.1: Black's king is in front of the pawn 201
3.2.2: White's king is in front of the pawn 203
3.2.3: White's rook is in front of the pawn 206
3.2.4: Other situations 208

### 3.2.1: Black's king is in front of the pawn

This section did not appear in chapter 2, because if Black can bring his king in front of a b-pawn the result is almost always a draw. The situation with a c-pawn is not so clear-cut, because White may win if Black's rook is trapped on the back rank.

**(338):** This is the typical winning position. It doesn't matter who is to play because Black cannot improve his position. White to play wins by 1



338 +/–

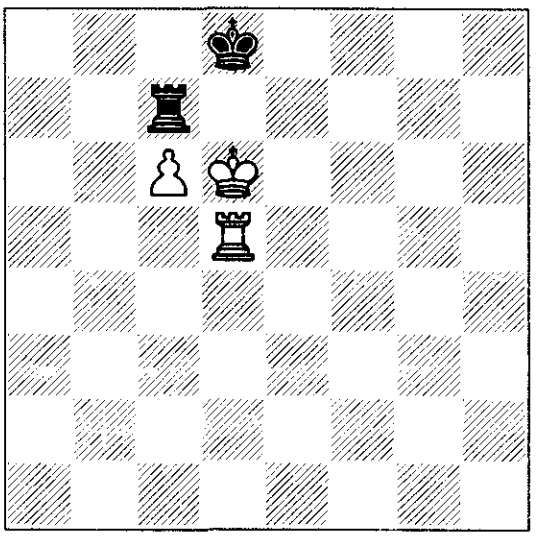
♖g7+ ♔f8 (or 1...♔h8 2 ♖h7+ ♔g8 3 f7+) 2 ♖h7 ♔g8 3 f7+.

However, this win depends on White's king occupying g6. Moving the king to e6 results in a draw, for example 1 ♖g7+ (1 ♔f5 ♖a1 and Black starts checking from behind) ♔f8 2 ♖h7 ♖a6+ (2...♔g8 is also good) 3 ♔f5 ♖a1 and Black has no problems.

It must be emphasized that White cannot normally force diagram 338 if he starts with the pawn further back. It can only arise if Black has an initially unfavourable position (or if he makes a blunder!).

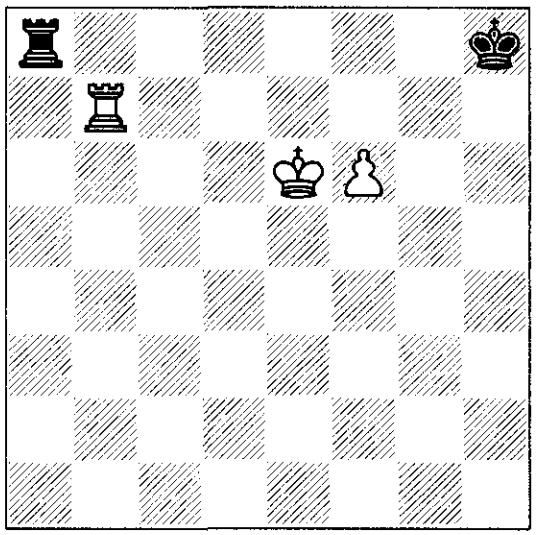
In exceptional circumstances White can succeed in transferring his king from e6 to g6. The next two diagrams provide examples.

**(339):** White must take care because 1 ♖h5? ♖d7+! 2 ♔c5 ♖d1 leads to a draw. The winning line runs 1 ♔c5+! ♔c8 2 ♔b6! (2 ♖h5? ♔b8! 3 ♔b6 ♖b7+! is an echo stalemate) ♖h7 (2...♔b8 3 ♖d8+ ♖c8 4 c7+) 3 ♖g5 ♖h8 4 ♖a5, very much as in diagram 338.



339 +/=

*Edward Lasker*
*Schachstrategie*

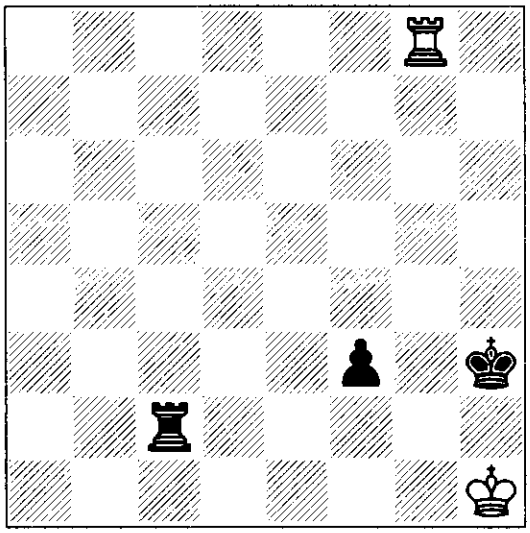


340 +/=

*ECE, 1985*

**(340):** Black to play can draw by 1...♔g8! 2 ♔e7 (2 ♔f5 ♖a1) ♖c8 3 ♖b1 (3 f7+ ♔g7) ♖c7+!, while White to play wins by 1 ♔f5! (not 1 ♔f7? ♔h7! drawing as in diagram 342) ♖g8 (1...♔g8 2 ♔g6! is diagram 338, while 1...♖a1 2 ♖b8+ ♔h7 3 f7! wins easily) 2 ♖b1 ♖a8 (or 2...♖g2 3 ♖b8+) 3 ♔g6 ♔g8 4 ♖b7 reaching diagram 338.

We end this section with a useful tactical point.



341 =/+

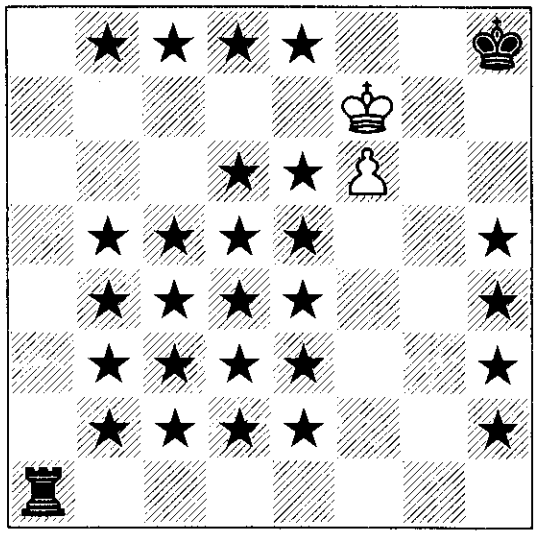
*Minev, 1985*

(**341**): Black to play can win by 1...♖c1+ exchanging rooks. White to play draws by 1 ♔g1! (1 ♖h8+? ♔g3! 2 ♖g8+ ♔f2! 3 ♖a8 ♖c7 4 ♖a2+ ♔g3! wins for Black) ♖g2+ 2 ♔h1! (this stalemate trick saves the day for White) f2 (2...♖g4 3 ♖f8 ♔g3 4 ♔g1! draws) 3 ♖g3+ (3 ♖h8+ also draws) forcing stalemate.

## 3.2.2: White's king is in front of the pawn

Once again, if Black's king is on the long side then the results are basically the same as for the b-pawn, namely that White wins. When Black's king is on the short side the situation is more complicated. First of all suppose that White's king is on f7 and Black's is on h8. In this case White usually wins.

(**342**): With Black to move, White wins if his rook is on any of the marked



342 /–

*Chéron, 1926*

squares. We consider the following typical cases: W♖b2, b6, d6, e6.

**W♖b2:** If the rook is free to move both to the h-file and to the eighth rank then Black has no chance. White wins after 1...♖a7+ (1...♖h1 2 ♔f8 ♔h7 3 f7 ♖h3 4 ♖e2, followed by ♔e7) 2 ♔g6! (2 ♔f8? ♔h7! 3 f7 ♖a8+! draws) ♖a8 3 ♖h2+ and 4 f7+.

**W♖b6:** Black draws by 1...♔h7! 2 ♖e6 and now:

1) **2...♔h6?** 3 ♔f8! ♖a8+ (3...♔h7 4 f7) 4 ♖e8! ♖a7 5 f7 ♔g6 (5...♔h7 6 ♖d8 followed by ♔e8 wins) 6 ♖e6+! ♔h7 7 ♖f6 ♖a8+ 8 ♔e7 ♖a7+ 9 ♔e6 ♖a6+ 10 ♔e5 ♖a5+ 11 ♔d4 and wins.

2) **2...♖a7+?** 3 ♔f8! ♖a8+ (or else f7) 4 ♖e8!, followed by f7 in any case.

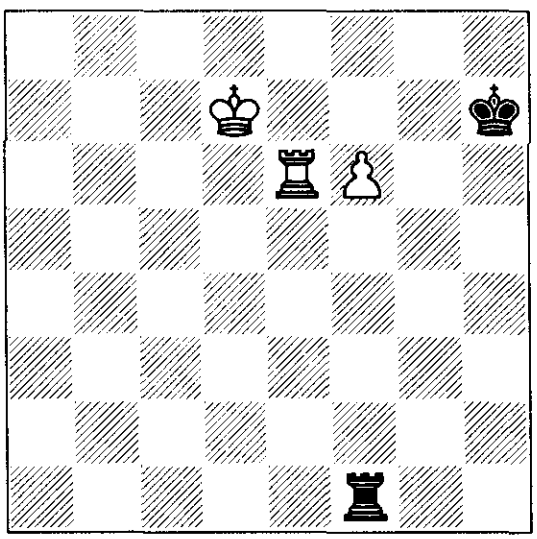
3) **2...♖a8!** 3 ♖e8 (or 3 ♔e7 ♔g6) ♖a7+ 4 ♖e7 (4 ♔f8 ♔g6! or 4 ♔e6 ♖a6+! 5 ♔f5 ♖a5+! 6 ♖e5 ♖a1 with a comfortable draw) ♖a8 (the simplest, although 4...♖a1 also draws; Black must take care to avoid the plausible trap 4...♖a6?, when 5 ♔f8+! ♔g6 6 f7 wins since after 6...♔f6 7 ♔g8 Black

has no rook check on the g-file) 5 ♖d7 ♔h6 6 ♖d1 ♖a7+! 7 ♔e8 ♔g6! 8 ♖f1 (8 f7 ♖a8+!) ♖a8+! and the lateral checks draw.

**W♖d6:** After 1...♔h7 White wins by 2 ♔e8! (2 ♔f8? ♖a8+! 3 ♔e7 ♔g6 draws) ♖e1+ (2...♖a8+ 3 ♖d8! ♖a1 4 f7 ♖e1+ 5 ♔d7 ♖d1+ 6 ♔c7 ♖c1+ 7 ♔b6 wins) 3 ♔f8 ♖a1 4 ♖d8 (not 4 f7? ♖a8+! 5 ♔e7 ♔g7! drawing) and Black cannot prevent a decisive 5 f7.

**W♖e6:** 1...♔h7 2 ♔f8! (compared to the position with W♖b6, Black is a tempo down and therefore has no time for ...♖a8) ♖a2 (or 2...♖a8+ 3 ♖e8! followed by f7) 3 f7 ♖a7 4 ♖f6 winning as in line 1 above.

Black's chances are much better when his king is on h7, and in this case Black to move usually draws. We need not give any details as the relevant lines may be extracted from the above analysis.



343 +/=

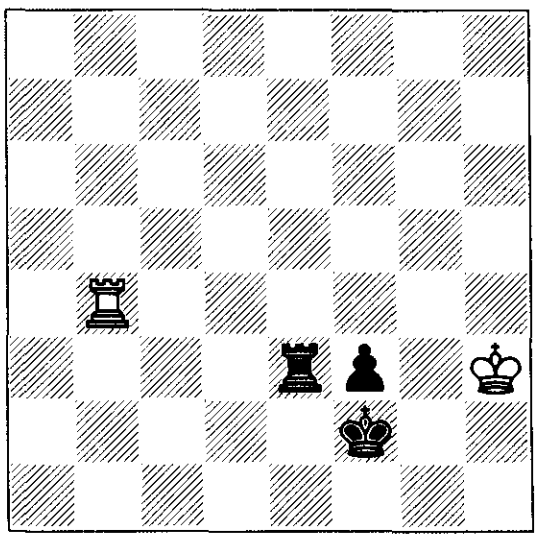
*Original*

(**343**): White to move has two possibilities:

1) **1 ♔e7?** ♔g6! (1...♔g8? 2 ♖e2 and 1...♖a1? 2 f7 are hopeless) 2 ♖e2 (2 f7+ ♔g7!) ♖a1 (or 2...♖b1, but not 2...♖c1? 3 ♖g2+! ♔h7 4 ♖f2 ♖c7+ 5 ♔d8 ♖f7 6 ♔e8! ♔g6 7 ♖g2+!) 3 ♖g2+ ♔h7 4 f7 ♖a7+! draws by diagram 325.

2) **1 ♔e8!** ♔g8 (1...♔g6 2 f7+! ♔g7 3 ♖e2 wins) 2 ♔e7! (threat ♖e2) ♔h7 (there isn't much Black can do) 3 ♖e2 (threat 4 f7) ♖a1 4 f7 ♖a7+ 5 ♔f6 ♖a6+ 6 ♖e6 ♖a8 7 ♖e8 and wins.

Black to move draws by 1...♔g6 2 ♔e7 ♖f2, as in line 1 above.



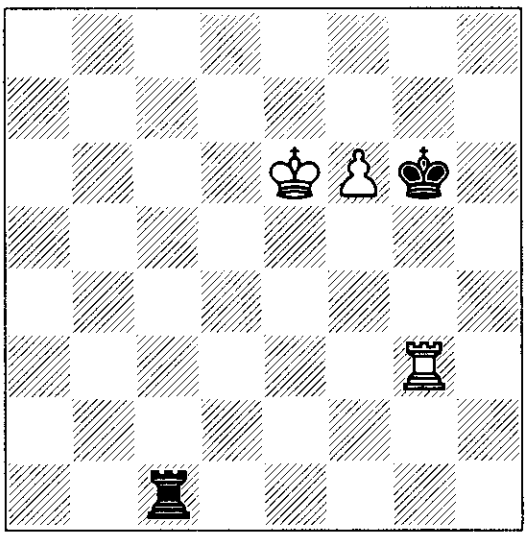
344 =/+

**Al Mokhtar – Bernschutz**

*Dubai Olympiad, 1986*

(**344**): White to play draws by 1 ♖b1! ♖e1 2 ♖b2+ as in diagram 342 with W♖b6 (it doesn't matter whether White's king is on h2 or h3). In the game Black was to move and play continued 1...♖e7? (1...♔f1! 2 ♖b1+ ♖e1! was the winning line, as in diagram 342 with W♖b6, line 1) 2 ♖b2+! ♖e2 3 ♖b3 (this loses with the king on h2, but here it is safe; any other square

on the b-file also draws) ♖e3 4 ♖b2+? (repeating the position, but this time Black doesn't miss his chance; 4 ♖b1! draws) ♔f1! 5 ♖b1+ ♖e1! 6 ♖b2 f2 7 ♔h2 ♖c1 8 ♔g3 (or 8 ♖b8 ♔e2 9 ♖e8+ ♔d3) ♔g1?? (an incredible blunder; 8...♖c3+! 9 ♔h2 ♖f3 wins easily) 9 ♖xf2 ½-½.



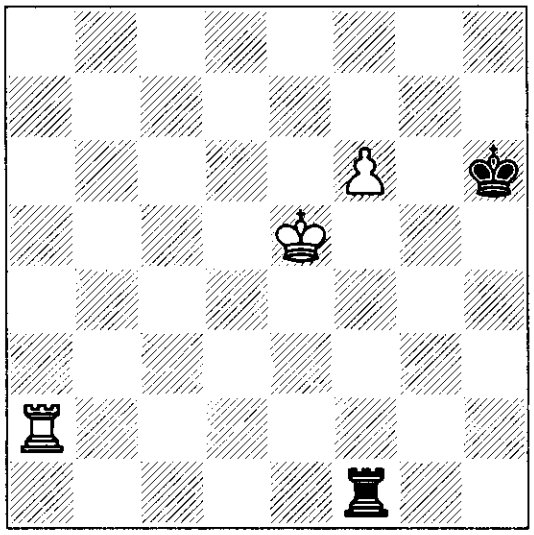
345 /=

**Sax – Tseshkovsky**
*Rovinj/Zagreb, 1975*

(**345**): Black to play resigned in this position, even though he can draw by 1...♔h7! (not 1...♔h6? 2 f7 and now 2...♖c8 loses to 3 ♖g8, while after 2...♖e1+ 3 ♔d6 ♖d1+ 4 ♔e7 ♖e1+ 5 ♔f8 ♔h7 6 ♖h3+ ♔g6 7 ♔g8 White promotes) with two possibilities:

1) **2 f7** ♖c8! (not 2...♖c6+ 3 ♔d7! ♖f6 4 ♔e7) 3 ♔d7 (3 ♔e7 ♖c7+!) ♖a8 drawing as in diagram 323.

2) **2 ♖g7+** ♔h6! (not 2...♔h8? 3 ♖a7 ♖e1+ 4 ♔f7! ♔h7 5 ♖a2 ♖h1 6 ♖d2 ♖h3 7 ♔f8 ♖a3 8 f7 and wins) 3 ♖g8 ♖c6+! 4 ♔e7 ♖c7+! 5 ♔d6 ♖a7 and White is unable to make any progress.



346 =/=

*Original*

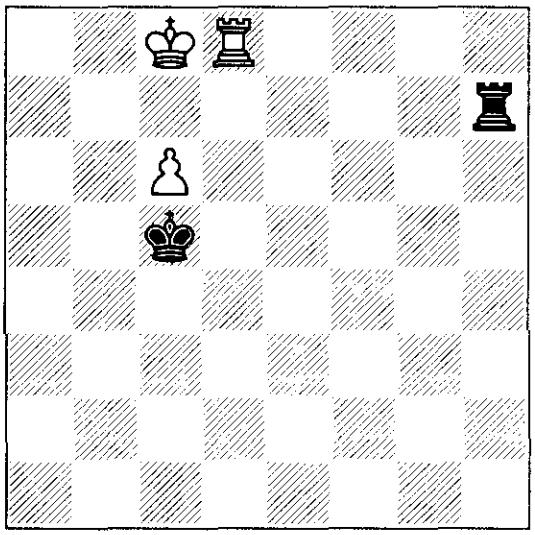
(**346**): In this typical practical situation Black must defend accurately. After 1 ♔e6 (threatening to win by 2 f7) Black may try:

1) **1...♖c1?** 2 ♖f2! (not 2 f7? ♖c8! drawing after 3 ♖f2 ♔g7! 4 ♖g2+ ♔h7! or 3 ♔d7 ♖b8! 4 ♖b2 ♖a8!) ♖c8 (2...♖e1+ 3 ♔f7) 3 ♔e7 (3 f7? ♔g7!) ♖c7+ (3...♖a8 4 f7!) 4 ♔d8! ♖f7 5 ♔e8! ♔g6 6 ♖g2+! wins.

2) **1...♖b1!** 2 ♖f2 (2 ♖h2+ ♔g6 3 ♖g2+ ♔h7) ♖b6+ 3 ♔e5 ♖b5+ 4 ♔d6 ♖b8! 5 f7 ♔g7! 6 ♔e7 ♖b7+! draws.

We have thoroughly examined the case in which Black's king is on the short side. In the remainder of this section we look at a few interesting positions in which Black's king occupies other areas of the board. The first position is related to the analysis of diagram 342.

(**347**): White plays 1 ♖d7! (1 c7? ♔c6! wins the pawn) ♖h1 (1...♖h6 2 c7! wins after either 2...♔c6 3 ♔b8! or 2...♖h1 3 ♖d2 ♔c6 4 ♖c2+ ♔d6 5 ♖b2 ♖h8+ 6 ♔b7 ♖h7 7 ♔b8) 2 ♔b7!

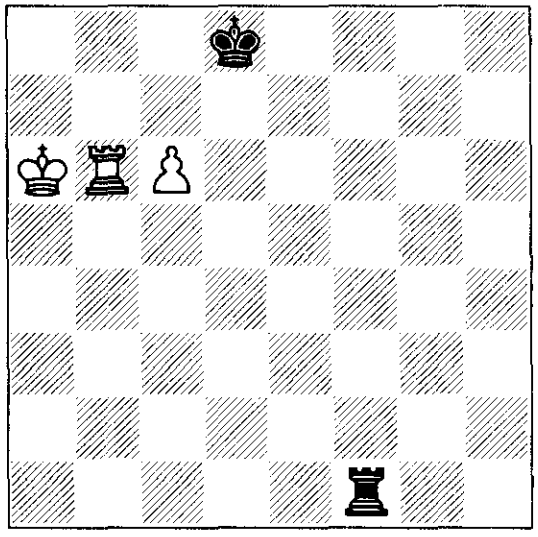


347 +/

*Chéron, 1947*

(not 2 c7? ♔c6! 3 ♔b8 ♖b1+! drawing) ♖b1+ (2...♖h6 3 ♖d1) 3 ♔c7! ♖a1 (3...♖b6 4 ♖d5+ or 3...♖h1 4 ♖g7 ♖h5 5 ♔b7) 4 ♖d2 ♖h1 (4...♖a7+ 5 ♔b8!) 5 ♖c2+ ♔d5 6 ♔c8 winning.

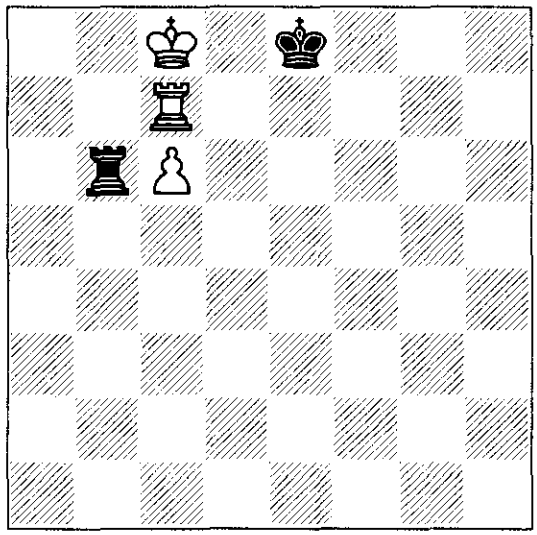
The remaining examples cover two positions of reciprocal zugzwang.



348 +/=

*ECE, 1985*

(**348**): White wins by 1 ♔b7! ♖f7+ (1...♖c1 2 ♖b2, followed by ♖d2+) 2 ♔b8! (threat ♖b7) ♖c7 3 ♖a6! (this is the zugzwang; if White were to play he could only continue ♖b6, but then Black draws by checking on c8 and c7) ♖c8+ 4 ♔b7! ♖c7+ 5 ♔b6! ♖c8 6 ♖a7 ♖b8+ (6...♔e8 7 ♖h7 ♖b8+ 8 ♔a7 wins) 7 ♖b7! ♖a8 8 c7+ ♔c8 (8...♔d7 9 ♖b8) 9 ♔c6! ♖a6+ 10 ♖b6! (this is the reciprocal zugzwang mentioned after diagram 337) ♖a8 11 ♔d6! with a final zugzwang.



349 =/–

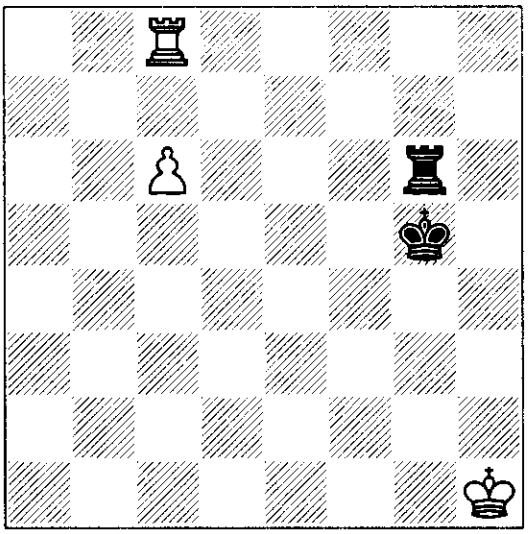
*Original*

(**349**): White to play must abandon his pawn straight away, while if Black is to move White can win by 1...♖a6 (1...♖b1 2 ♖b7 or 1...♔f8 2 ♔d7) 2 ♔b7 ♖a1 3 ♖c8+ ♔e7 4 ♖b8 (4 c7? ♖b1+! draws) ♔d6 5 c7 ♖b1+ 6 ♔c8 ♖h1 7 ♖b6+ and the pawn advances.

### 3.2.3: White's rook is in front of the pawn

Here the results closely follow those for section 2.2.1, for example diagram 64 shifted to the right by two files (W♔g4, ♖c8, ♙c6 v B♔g6, ♖f7) is

still reciprocal zugzwang. Moreover, the position W♔g7, ♖c7, ♙c6 v B♔g5, ♖h6, derived from diagram 200, remains reciprocal zugzwang with virtually identical analysis. However the following position is new:



350 =/–

*Original*

(**350**): Firstly, if Black is to play:

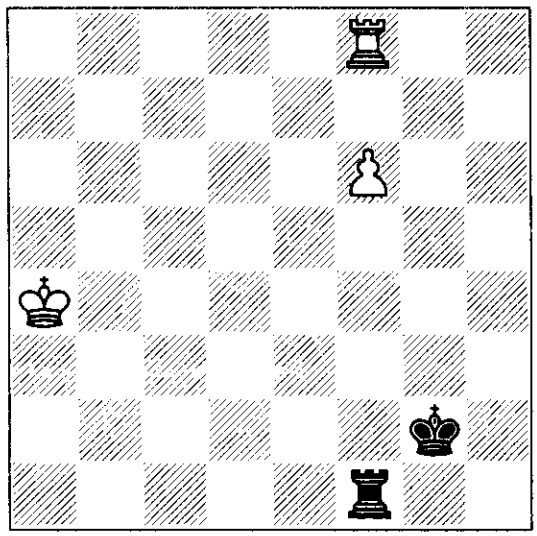
1) **1...♔g4** (if Black moves his king anywhere else White gives a rook check and then plays c7) 2 c7! (after 2 ♔h2? ♖g5! White cannot win, for example 3 ♔h1 ♔g3, or 3 c7 ♖g7! reaching diagram 330 with White to move) ♖g7 3 ♔h2! and now we have diagram 330 with Black to move.

2) **1...♖g7** 2 c7! again reaches the zugzwang of diagram 330.

3) **1...♖h6+** 2 ♔g2 ♖g6 3 c7 ♖g7 4 ♔f3 wins easily.

With White to play, 1 c7 (1 ♔h2 ♔g4) ♖g7! 2 ♔h2 ♔g4 transposes into the analysis of diagram 330.

Moving White's king from h1 to h3 gives a second reciprocal zugzwang, with very similar play.



351 +/

*Mandler, 1952*
*Prace*

(**351**): The first move is obvious but the second isn't! 1 ♔b5! (1 f7? ♖f4+! 2 ♔b5 ♔f1 draws because there is no shelter for White's king, and after 1 ♔b4? ♖f5! 2 ♔c4 ♔f3 3 ♔d4 ♔f4 4 f7 ♖f6 5 ♔d5 Black can draw by 5...♔f3 or 5...♔f5) ♔g3 (1...♖f5+ 2 ♔c6 drives the king towards the pawn, while 1...♔h3 strays too far and loses after 2 f7) and now:

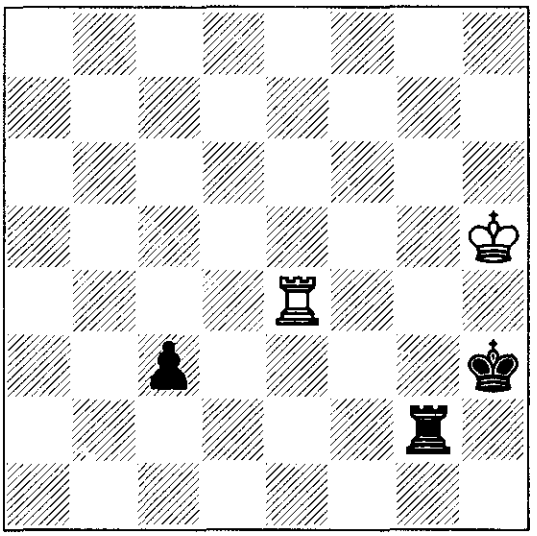
1) **2 ♔c6?** (the natural move, but in fact it throws away the win) ♔g4! 3 f7 (or 3 ♔d7 ♔f5! 4 ♔e7 ♖a1 5 f7 ♖a7+ drawing) ♖f6+! 4 ♔d7 ♔f5! reaches the reciprocal zugzwang mentioned after diagram 329, with White to move.

2) **2 ♔c5!** (White threatens to support the pawn with his king, so Black's reply is forced) ♔g4 3 f7! (3 ♔d6? ♔f5! draws as in line 1) ♖f5+ 4 ♔d6! ♔f4 (4...♔f3 5 ♔e6 wins at once) 5 ♔d7 (White must transfer the move to Black) ♖d5+ (forced, as 5...♖f6 6 ♔e7 and 5...♔f3 6 ♔e6 lose immediately)

6 ♔c6 ♖f5 7 ♔d6 and Black is in zugzwang.

### 3.2.4: Other situations

The remaining positions fall into no special category. The following study is based on the position W♔e6, ♖d6, ♙c6 v B♔e4, ♖c7, a reciprocal zugzwang derived from diagram 22. It is worth noting that reflecting this position about the c-file gives W♔a6, ♖b6, ♙c6 v B♔a4, ♖c7, and this too is reciprocal zugzwang.



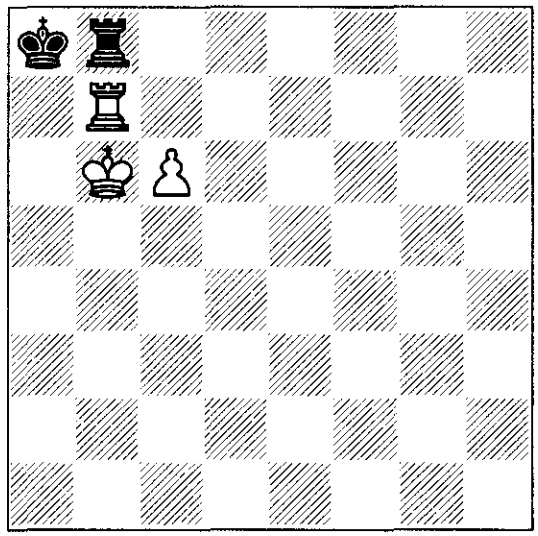
352 –/+

*Pogosiants, 1985*
*=3-5 HM, Molodoi Leninets*

**(352):** This was published as a 'White to play and draw' study, but it is unsound. After 1 ♖e3+ ♖g3! 2 ♖e2 (or 2 ♖e4 ♔g2 3 ♔h4 ♔f2, followed by ...♖e3, ...♔e2, etc.) ♖f3 (making space for Black's king to edge closer) 3 ♔g5 (3 ♖c2 ♔g3 4 ♔g5 transposes) ♔g3! 4 ♖c2 Black can play:

1) **4...♖e3?** (the only move considered by the composer) 5 ♔f5! ♔f3 6 ♖h2! (this position of reciprocal zugzwang is simply diagram 331 shifted by a rank; if White were to play he would lose after 1 ♖c2 ♖d3! 2 ♔e5 ♔e3! with zugzwang) ♖d3 7 ♔e5! ♔e3 8 ♖c2! and the critical zugzwang arrives with Black to move.

2) **4...♖d3!** (now Black arrives at the critical position with White to play) 5 ♔f5 ♔f3! 6 ♔e5 (6 ♖h2 ♖d5+ 7 ♔e6 ♖c5 8 ♖c2 ♔e3 wins) ♔e3! (zugzwang) 7 ♖h2 ♖d8 and Black supports the pawn with his king, winning easily.

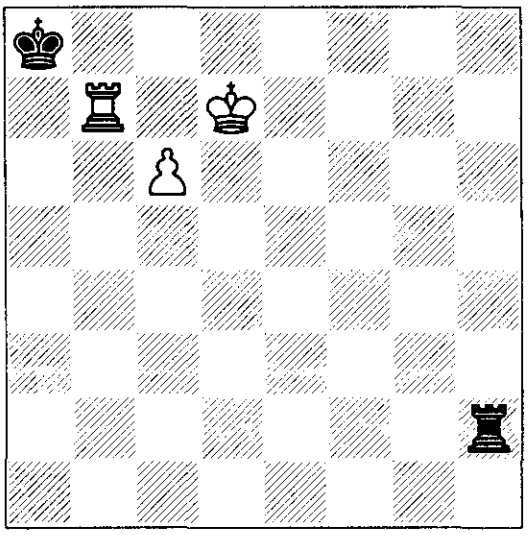


353 =/–

*Original*

**(353):** Here is a straightforward position of reciprocal zugzwang. Black to move loses after 1...♖e8 2 ♖a7+ ♔b8 3 c7+ ♔c8 4 ♖a8+, so we need only consider the case of White to move. The result is a draw after 1 ♔c7 (1 ♔a6 ♖xb7!) ♖c8+ (1...♖h8 also leads to a draw) 2 ♔d7 ♖xc6 with stalemate.

**(354):** White wins by 1 ♖b8+! (1 ♔c7? ♖h8 is drawn by diagram 353)



354 +/
*Halumbirek, 1944*
*Deutsche Schachzeitung*

♔a7 2 c7! ♖d2+ 3 ♔e6 (White can also win without a rook promotion by 3 ♔c8 ♖h2 4 ♖b7+ ♔a8 5 ♖b6, as in diagram 326, so Halumbirek's study has an alternative, albeit more complicated, solution) ♖e2+ (now we have diagram 327) 4 ♔d5 ♖d2+ 5 ♔e4 ♖c2 6 c8♖! with a decisive material advantage.

Finally, readers will have noticed that there was no section with Black's king being cut off along a file. The reason is that when Black's king is on the long side a cut-off distance of one file is enough for a win, just as for the b-pawn. When Black's king is on the short side the question is whether Black can draw by checking from the side, and this was discussed under diagram 342.

There are 10 positions of reciprocal zugzwang in the ending of ♖+♙c6 v ♖. Two were mentioned before diagram 350, two in diagram 350 itself and two before diagram 352. The rest are diagrams 348, 349, 352 (in the analysis of line 1) and 353.

**Practical tips:** Diagram 342 is very important for practical players, but once again a good knowledge of the b-pawn positions should suffice for the remainder of this section.

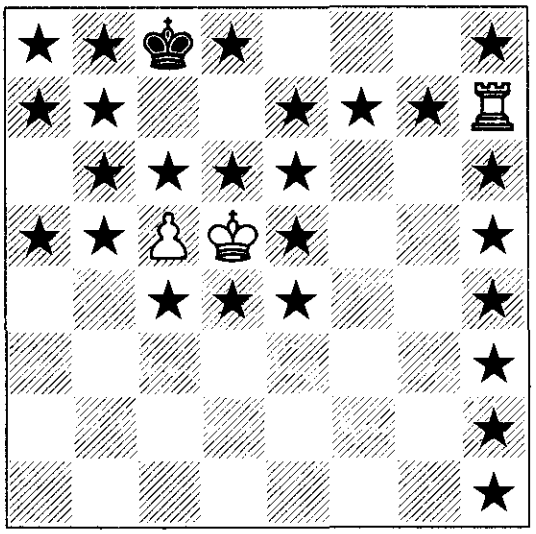
## 3.3: Pawn on the fifth rank

3.3.1: Black's king is in front of the pawn 209
3.3.2: White's king is in front of the pawn 210
3.3.3: Black's king is cut off along a rank 216
3.3.4: Other situations 216

### 3.3.1: Black's king is in front of the pawn

In general this is a draw, but White can sometimes win with a very favourable initial position. The following diagram illustrates this point.

(355): White to play can win if Black's rook is on any of the starred squares, otherwise the position is a draw. There might seem to be a lot of winning squares for a position which is 'generally drawn', but 19 of the 25 marked squares allow the immediate



355 /–

*Original*

capture of Black's rook. We examine the following cases in more detail: B♖g6, c1, a5, d8, e8.

**B♖g6:** This is the standard drawing position in the ending of ♖+♙ v ♖. Even if White drives Black's king to the back rank and advances his pawn to the fifth, Black cannot lose provided his rook occupies the third rank. White cannot make progress because if he plays 1 c6, Black replies 1...♖g1, ready to check White's king from behind if it moves to d6 or b6.

**B♖c1:** (Stein-Reshevsky, Los Angeles 1968). Even though White's king can advance to the sixth rank the position is still drawn. After 1 ♔c6 (1 ♔d6 ♖d1+ 2 ♔c6 ♔b8! is the same) Black must choose which way to move his king. The rule for all such situations is simple: Black's king must move to the short side, because he will need long-range lateral rook checks later. Here 1...♔d8? loses after 2 ♖h8+ ♔e7 3 ♖c8 ♖c2 4 ♔b7 ♖b2+ 5 ♔c7, eventually reaching the Lucena position. The drawing line is 1...♔b8! 2 ♖h8+ (2 ♖b7+ ♔c8 doesn't help White) ♔a7 3 ♖d8 (after 3 ♖c8 ♖h1 White cannot proceed with ♔d7 and c6 because Black starts checking from the side) ♖c2 4 ♔d6 ♔b7 ½-½.

**B♖a5:** Black's rook is restricted and cannot check from behind. White wins by 1 ♔d6! ♖a1 (1...♔b8 2 c6) 2 ♖h8+! (2 c6? ♖d1+! draws) ♔b7 3 c6+! ♔b6 4 ♖b8+! ♔a7 5 c7 followed by promoting to a rook, as in diagram 327.

**B♖d8:** In this case White wins because Black's rook gets trapped on the back rank. 1 ♔c6! ♖g8 (threatening ...♖g6+) 2 ♔b6 ♖g1 (2...♖g6+ 3 c6 ♖g8 4 ♖a7 wins) 3 ♖h8+! ♔d7 4 c6+! ♔d6 5 ♖d8+ and 6 c7, winning without a rook promotion.

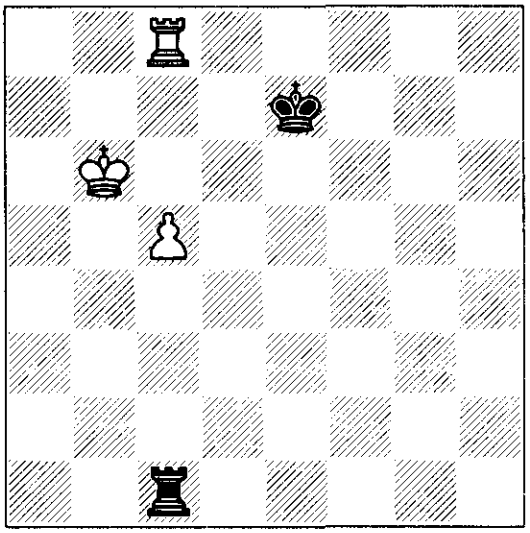
**B♖e8:** This is a draw because 1 ♔c6 is met by 1...♖e6+! and 1 ♔d6 ♖g8 prepares to occupy the third rank.

The conclusions are similar if the white king starts on b5. The result is usually a draw but White can win if Black's rook is poorly placed, for example B♖g5 loses to 1 ♔b6 because there is no check from behind.

### 3.3.2: White's king is in front of the pawn

If Black's king is on the long side of the pawn then his chances are very poor, because there is little he can do to avoid the Lucena position.

**(356):** Even in this relatively favourable case Black cannot save the game. 1...♔d7 2 ♖c7+! (or else ...♖b1+) ♔d8 3 ♔b7! (White must be careful



356 +/–

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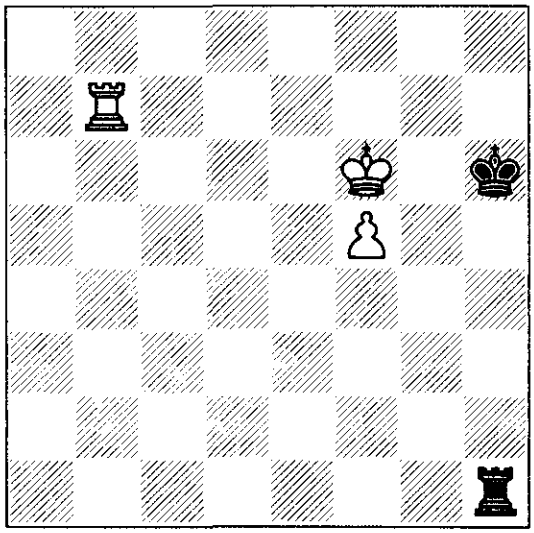


357 =/=

**Schlechter – Tarrasch**

*Cologne 1911*

not to allow Black's king to slip away to the short side, for example 3 ♖h7? ♔c8! 4 ♔c6 ♔b8! draws) ♖b1+ (or 3...♖c2 4 ♖c8+ ♔e7 5 c6 and wins) 4 ♔c6! (this is possible now that Black isn't attacking c5) ♖h1 5 ♖g7 (threat 6 ♖g8+ and 7 ♔c7) ♖c1 (5...♖h6+ 6 ♔b7! wins) 6 ♖g8+ ♔e7 7 ♖c8 (we saw this idea in diagram 355 with B♖c1) ♖c2 (there is nothing Black can do to prevent the pawn's advance) 8 ♔b7 ♖c1 9 c6 ♖b1+ 10 ♔c7! ♖a1 11 ♖b8 ♖h1 12 ♔b7 ♖b1+ 13 ♔c8, followed by c7.

Black's chances are much better when his king is on the short side, indeed most positions are drawn.

**(357):** It is White to move and the black rook is poorly placed, but the position is still drawn. The game continued 1 ♖b2 (1 ♖b8 ♔h7! 2 ♔f7 ♖a1 draws) and now:

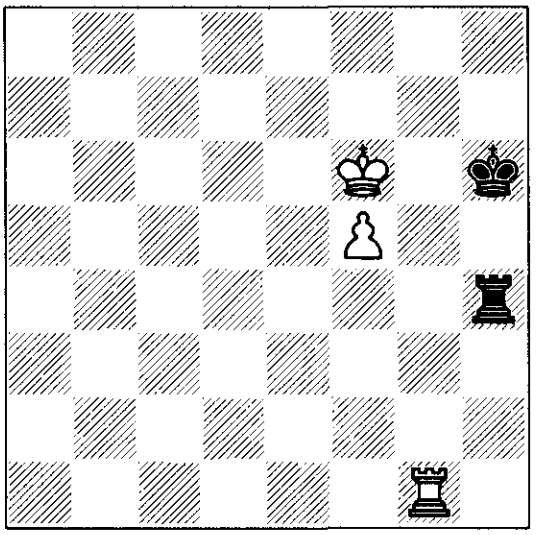
1) **1...♔h7?** 2 ♔f7! (White advances his pawn while tying Black's rook to the h-file) ♔h6 3 f6 ♖h3 4 ♖d2 ♖h1 5 ♔f8 ♖a1 6 f7 with an easy win.

2) **1...♔h5?** 2 ♔f7 ♔g5 3 f6 ♖g1 4 ♖f2 ♔h6 5 ♔f8 ♖a1 6 f7 and White wins.

3) **1...♖h5?** 2 ♖b8 (2 ♔e6? ♖h1 3 f6 ♖a1! draws, but not 3...♖c1? 4 ♖f2! and White wins – see diagram 346 for more details) ♔h7 3 ♔e6 ♖h1 4 f6! ♖e1+ 5 ♔f7 ♖a1 6 ♔e8 ♔g6 7 f7! ♖e1+ 8 ♔f8! ♖f1 9 ♖b6+ ♔h7 10 ♖b2 and wins.

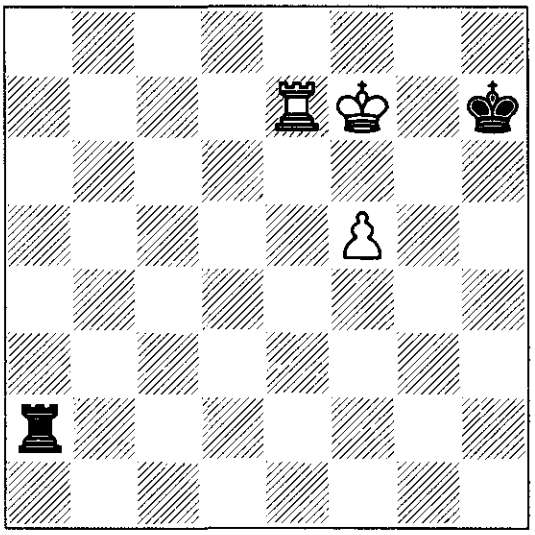
4) **1...♖h3** (Tarrasch finds a good move; 1...♖h4 also draws) 2 ♔f7 (2 ♖g2 ♖h1 3 ♔f7 ♖a1 draws) ♖a3 (there is no mate threat, so Black can activate his rook; 2...♖d3? is not far enough and loses after 3 ♖h2+! ♔g5 4 f6) 3 ♖b7 ♖a8 4 f6 ♔h7 ½-½.

**(358):** This is virtually identical to the previous diagram and it is interesting to see how the grandmasters of another generation handled the position. 1 ♖e1 (1 ♖g8 ♔h7! 2 ♖a8 ♖b4 draws) ♖h2 (just as in the previous diagram, Black can only wait until White plays ♔f7) 2 ♔f7 and now:



358 =/=

**Miles – Benko**
*Sao Paulo, 1977*



359 +/=

*Maizelis, 1940*
*Shakhmaty v SSSR*

1) **2...♖c2?** 3 ♖e6+! (3 f6? ♖c7+! 4 ♖e7 ♖c8 draws) ♔h7 (3...♔g5 4 f6! ♔h6 5 ♔f8! wins as in diagram 342 with W♖e6) 4 f6! ♖c8 (4...♔h6 5 ♔f8! as above) 5 ♖e8 ♖c7+ 6 ♔e6! ♖c6+ 7 ♔e7! ♖c7+ 8 ♔d6! and now it becomes clear why the c-file was too close to White's king: Black has no more checks and must allow either ♖e7+ or f7.

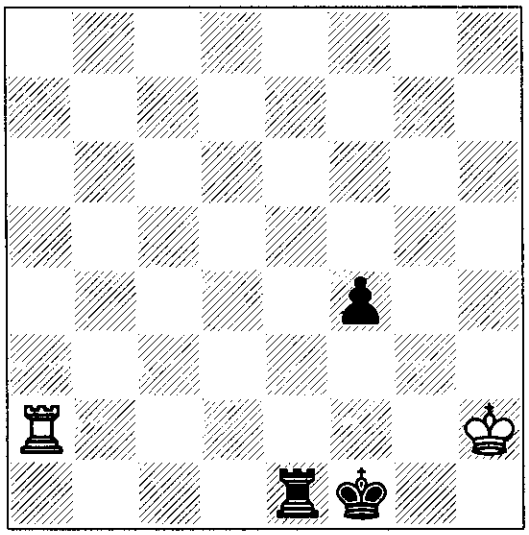
2) **2...♖a2** (2...♖b2 is also good) 3 ♖e6+ (3 f6 ♖a7+! 4 ♖e7 ♖a8 draws) ♔h7! (3...♔g5 4 f6! wins as in line 1) 4 f6 and here Benko made his first error of the ending by losing on time. At this point *ECE* wrongly gives 4...♖a7+ 5 ♖e7 as a draw. We have already analysed this position in diagram 342 with W♖b6, where we proved that 4...♖a8! is the unique drawing move (4...♖a7+? loses after 5 ♔f8!).

The above examples show that White can only expect to win if he starts from a favourable position. We now examine a few such possibilities.

**(359):** Black to play can draw by 1...♖a8, amongst other moves, so we take White to move. The situation is very favourable both because White's rook occupies the useful e-file and because he can gain time by starting with a check. The winning line runs 1 ♔f8+! (1 f6? ♖a8! draws) ♔h6 (1...♔h8 2 f6! wins after 2...♖a8+ 3 ♖e8! ♖a7 4 f7 ♔h7 5 ♖d8 or 2...♖a7 3 f7) 2 ♖e6+! (2 f6? ♔g6! 3 f7 ♔f6! draws) ♔h7 (2...♔g5 3 f6! ♔f5 4 ♖b6 ♔g6 5 f7+! ♔h7 6 ♔e7 wins) 3 f6! transposing into diagram 342 with W♖e6.

**(360):** Black to play can win by 1...♖e2+! (1...f3? 2 ♔g3!) 2 ♔h1 f3! 3 ♖a1+ ♖e1! (3...♔f2? 4 ♔h2! draws) 4 ♖a2 f2 5 ♔h2 ♖d1 followed by ...♔e1. Therefore we take White to play:

1) **1 ♔h3?** (this position arose in Kotov-Flohr, USSR Ch 1951) ♖e3+! (1...♖e2? 2 ♖a1+! ♔f2 3 ♔g4 f3 4 ♔h3 draws) 2 ♔g4 (2 ♔h2 ♖e2+! wins as in Black to play) f3! 3 ♔g3 (3 ♔f4 ♖d3 4 ♔e4 ♖b3 followed by ...f2 wins)

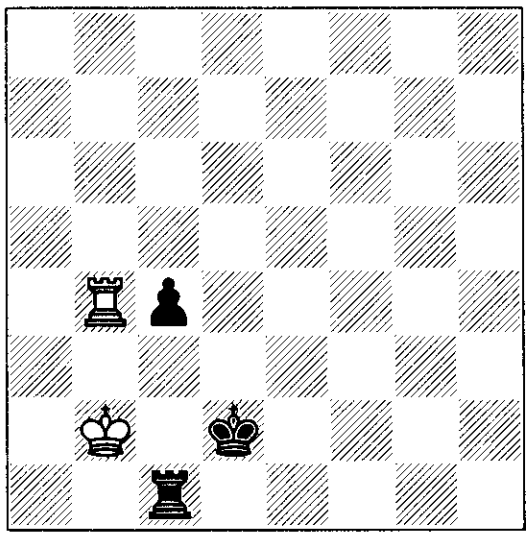


360 =/+

*Original*

f2+! 4 ♔h2 ♖e8 5 ♖a1+ ♔e2 6 ♖a2+ ♔f3 0-1.

2) **1 ♖a3!** ♖e2+ (1...♖e3 2 ♖a1+! ♔f2 3 ♖b1 draws) 2 ♔h1! ♖e3 (2...♔f2 3 ♔h2 f3 4 ♖a1) 3 ♖a1+! ♔f2 4 ♔h2 f3 5 ♖b1 draws.



361 =/+

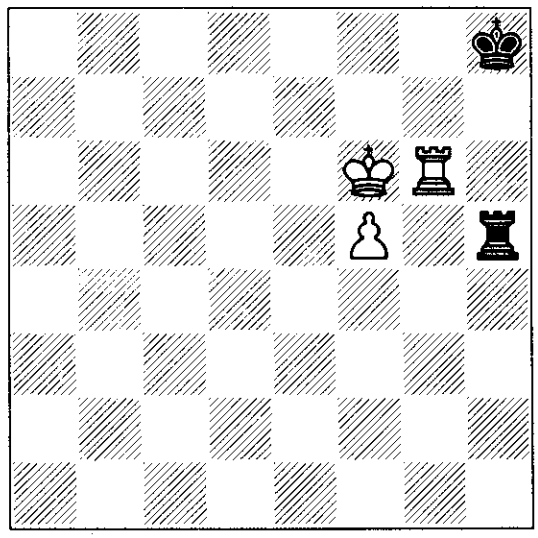
**Matsukevich – Lein**

*USSR, 1968*

(**361**): Black to play can win by 1...c3+! 2 ♔a2 c2, so suppose that White is to move. Although his rook is miserably placed he can still draw with accurate play:

1) **1 ♖b8?** (the game continuation) c3+! 2 ♔a2 ♖d1 3 ♖d8+ (or 3 ♖h8 c2 and wins) ♔c1 4 ♖h8 c2 5 ♖h2 ♖d8 (Black could have won more quickly by 5...♖e1 and 6...♔d1) 6 ♖h1+ ♔d2 7 ♖h2+ ♔c3 0-1.

2) **1 ♔a2!** (1 ♔a3? ♔c3 2 ♔a4 ♔d3 followed by ...c3 wins easily) c3 (1...♔c3 may be met by the safe 2 ♖b8, but the flashy 2 ♖b2 ♖c2 3 ♔a1! is also possible) 2 ♖h4 (compared to line 1, White has saved a tempo because his rook has reached the h-file in one move) ♖e1 3 ♖h2+ (or 3 ♔b3) ♖e2 4 ♖h1! draws.



362 +/=

*ECE, 1985*

(**362**): Once again the defender suffers from a badly placed rook, and the position of his king is also unsatisfactory. White to play wins by 1 ♔e6! ♖h7 (1...♔h7 2 ♖g1 ♖h2 3 ♔f7! pins Black's king down to the h-file and wins as in line 1 of diagram 357) 2 f6! ♖a7 3 f7! transposing to diagram 326.

Now suppose that Black is to play:

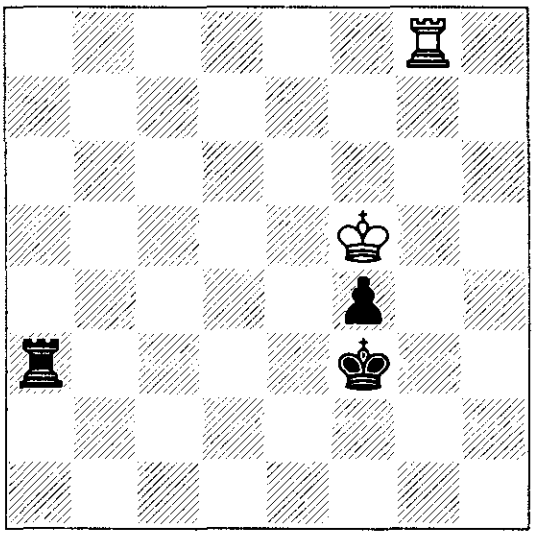
1) **1...♖h1?** 2 ♔f7! ♖h7+ 3 ♔f8! ♖h1 4 f6 ♔h7 5 ♖g7+ (simpler than 5 ♖g2 ♖a1 6 ♖e2!, although this also wins) ♔h8 (5...♔h6 6 ♔g8) 6 ♖g2 ♔h7 7 f7 and wins.

2) **1...♔h7** (contrary to *ECE*'s assertion, this move leads to a draw) 2 ♖g1 (threat 3 ♔e6 ♖h2 4 ♔f7! and Black's rook cannot leave the h-file) ♔h6! drawing as in diagrams 357 and 358. The point is that after 3 ♔e6 (3 ♖g8 ♔h7! doesn't help) ♖h2 4 ♔f7 there is no mate, so Black can reply 4...♖a2.

3) **1...♖h7** (this also leads to a draw, but Black must play accurately) 2 ♖g1 ♖a7 3 ♖e1 ♖a6+ 4 ♔f7 ♖a7+! 5 ♔g6 ♖g7+! 6 ♔f6 ♖g2 7 ♔e7 ♖g7+! 8 ♔e8 (8 ♔d6 ♖f7! draws after 9 ♖e8+ ♔g7! 10 ♖e7 ♔f6 or 9 ♔e6 ♔g8) ♖a7 (8...♖g8+? 9 ♔d7! ♖g7+ 10 ♖e7! ♖g1 11 f6! ♖d1+ 12 ♔e8 ♖a1 13 ♔f8 wins) 9 f6 (9 ♔f8 ♖a8+! 10 ♖e8 ♖a6! draws as in diagram 360) ♔g8! (9...♖a8+? 10 ♔f7 ♖a7+ 11 ♔g6 wins) 10 ♖g1+ ♔h7 11 f7 ♖a8+ draws.

When Black's king is on the short side, h6 and h7 are the best squares. The previous position shows that it is bad to be in the corner and the following position shows that it is just as harmful to be on h5.

**(363):** White's king is badly placed and if it were Black to move 1...♖a5+ would finish the game at once. Therefore, White tried to bring his king to the h-file: 1 ♔g5 ♖a5+ 2 ♔h4 (if it were White to move then the immediate activation of the rook by ♖b8 would draw, but Black is able to keep



363 –/+

**Van Riemsdijk – Kir.Georgiev**

*Manila IZ, 1990*

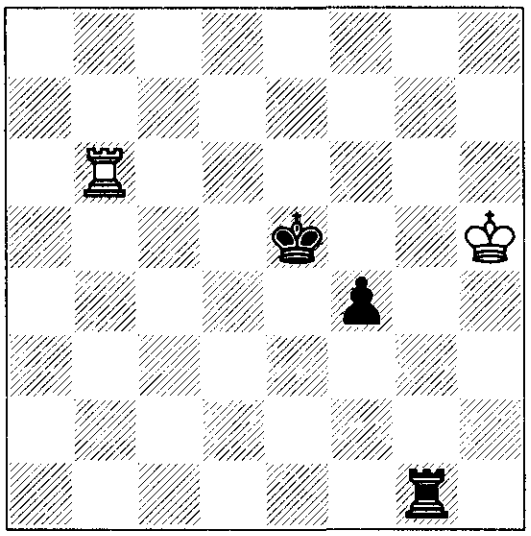
White busy) ♖a1 3 ♖f8 (3 ♖b8 ♖h1+! 4 ♔g5 ♔g3! wins easily) ♖g1 4 ♔h5 (White is in zugzwang; after 4 ♖f7 Black makes use of the back rank by 4...♖g8 5 ♖f6 ♖h8+ 6 ♔g5 ♔g3, followed by the advance of the pawn) ♔e3 5 ♔h4 (there is nothing White can do; his king is too far up the h-file) f3 6 ♔h3 f2 7 ♔h2 ♖g7 (7...f1♖ was also good) 8 ♖e8+ ♔d2 9 ♖f8 ♔e1 10 ♖e8+ ♔f1 11 ♖h8 ♖e7 0-1.

In the following position the defender's king is again badly placed.

**(364):** White can play:

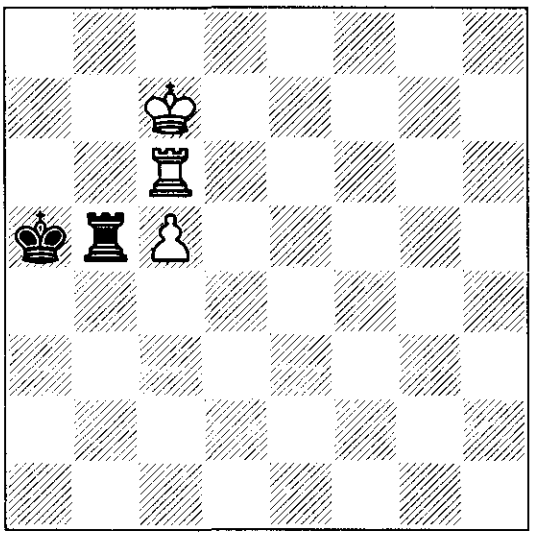
1) **1 ♖b5+** (White should only improve his king position when the circumstances are right) ♔e4 2 ♖b4+! ♔e3 3 ♖b3+! ♔f2 4 ♔h4! (this is the correct moment, when Black's king is blocking his pawn; 4 ♖b2+? ♔g3! wins) f3 (4...♖e1 5 ♔g4) 5 ♔h3! (not 5 ♖b2+? as in line 2) ♖e1 6 ♖a3 and White draws.

2) **1 ♔h4?** (the game continuation) f3! 2 ♖b5+ (2 ♖b2 would have been



364 =/

**Boersma – Ree**
*Netherlands Ch, 1987*



365 =/–

*Original*

more testing because the only winning reply is 2...♔f4!; 2...♔e4? draws after 3 ♔h3!) ♔e4 3 ♖b4+ ♔e3 4 ♖b3+ ♔e2 5 ♖b2+ ♔f1 6 ♔h3 f2! 7 ♔h2 (we know this is a win from diagram 326) ♖g2+! 8 ♔h1 ♖g6? (8...♖g3! wins as in diagram 326) 9 ♖b1+! ♔e2 10 ♖b2+! ♔e3 11 ♖b3+ ♔e4 12 ♖b4+ ♔d3 13 ♖b3+? (13 ♖b1! draws) ♔c2! 14 ♖f3 ♖g1+! 0-1.

We finish with two positions of reciprocal zugzwang.

**(365):** With Black to move:

1) **1...♔b4** (1...♔a4 2 ♖a6+ and 3 c6) 2 ♔d6! (threat ♖b6) ♔c4 and now:

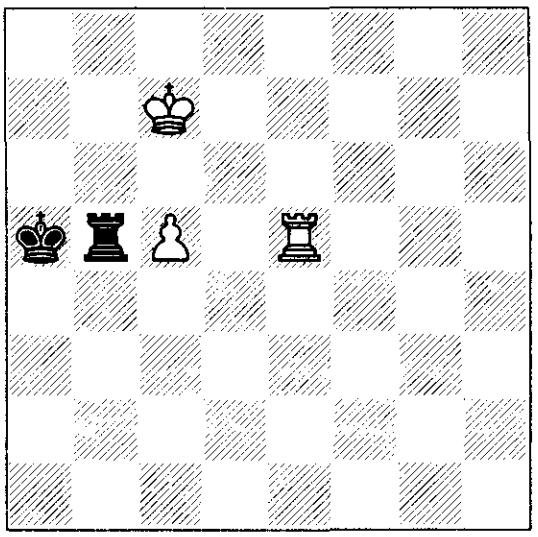
1a) **3 ♖c7?** ♖b8! 4 c6 (4 ♖h7 ♔b5 draws) ♖h8 5 ♖e7 (5 ♖b7 ♖h6+ 6 ♔d7 ♖h7+! 7 ♔c8 ♖h8+! 8 ♔c7 ♔c5! wins the pawn) ♔b5! (not 5...♖h6+? 6 ♔d7) 6 ♔c7 ♔a6 drawing as in diagram 342 with W♖b6.

1b) **3 ♖c8!** (clearing the way for the c-pawn) ♖b1 (3...♖b7 4 c6 ♖h7 5 c7) 4 c6 ♖d1+ 5 ♔c7! ♖c1 6 ♖h8 ♔b5 7 ♖h5+ ♔a6 8 ♖h2 with an easy win.

2) **1...♖b1** 2 ♖e6 (but not 2 ♖f6? ♖h1 drawing, as we shall see later) ♖h1 3 c6! and we know from diagram 342 that d6 and e6 are winning squares for White's rook, but f6, g6 and h6 are not. Therefore 2 ♖f6? would have thrown away the win. Here White wins after 3...♔a6 4 ♔d8!, as in diagram 342 with W♖d6.

White to move can only try 1 ♔d7 (1 ♔d6 is the same, while 1 ♔c8 ♔b4 loses the pawn), but the continuation 1...♖b8 2 ♖h6 ♖g8 3 ♖h7 (3 c6 ♔b6) ♔a6 4 ♔c7 ♖f8 offers him no winning chances.

**(366):** This position is more surprising, because White's rook is apparently free to move. With Black to play, 1...♔a6 (1...♔a4 2 ♔d6 followed by c6, or 1...♖b1 2 c6+ ♔a6 3 ♔c8) 2 ♖e6+ ♔a7 (2...♔a5 3 c6) 3 c6! ♖b7+ (a nice try, but unavailing; 3...♖h5 4 ♔d8! loses as in the previous diagram) 4 ♔d6! (4 ♔c8? ♖b8+! 5 ♔d7 ♖h8 draws) ♖b1 5 ♔d7 (threat c7) ♖c1 (5...♖d1+ 6 ♔c8 ♖h1 is the same) 6



366 =/–

*Original*

♔c8 ♖h1 7 ♖e8, followed by c7 and wins.

With White to play:

1) **1 ♔c6** ♖b8! (not 1...♖b1? 2 ♖e8 winning as in diagram 363) 2 ♖e1 ♖c8+! 3 ♔d6 ♔a6 4 c6 ♖h8 drawing.

2) **1 ♔d7** ♖b7+! 2 ♔c6 ♖h7 and Black manages to free his rook with gain of time.

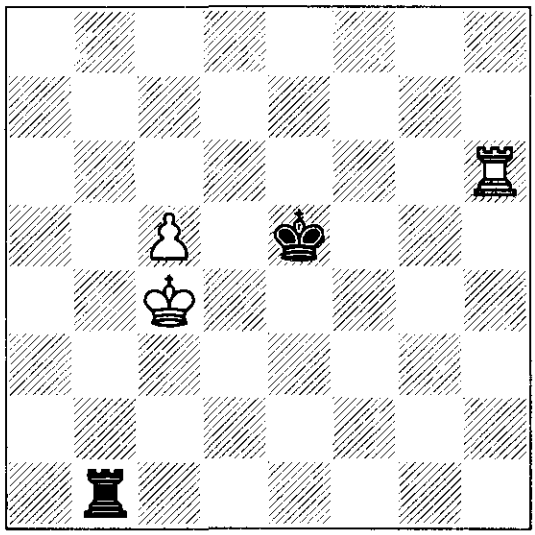
3) **1 ♔d6** ♖b1 2 ♖e8 (2 c6+ ♔b6!) ♖h1 3 c6 ♖h6+! 4 ♔d7 (4 ♖e6 ♖h8! draws) ♔b6! 5 ♖b8+ ♔c5! (5...♔a7 6 c7! wins) 6 c7 ♖h7+! and draws.

4) **1 ♖h5** ♔a6! 2 ♖h6+ ♔a7 3 c6 ♖g5 draws because White's rook is on a drawing square (i.e. f6, g6 or h6) and not a winning one (d6 or e6). See diagram 342 for more detailed analysis.

5) **1 ♖d5** (White tries to maintain his rook on a winning square) ♔a6! 2 ♖d6+ ♔a7! 3 c6 ♖b7+! (of course 3...♖h5 is a mistake with the rook on d6; White wins by 4 ♔c8!) 4 ♔d8 (unfortunately the rook blocks d6) ♖b8+! 5 ♔d7 ♖h8 6 ♔c7 ♖g8 with a familiar draw.

### 3.3.3: Black's king is cut off along a rank

Here the conclusions are quite simple. If White's rook is on the sixth rank he wins, but on the seventh rank the result depends on who controls the b-file.



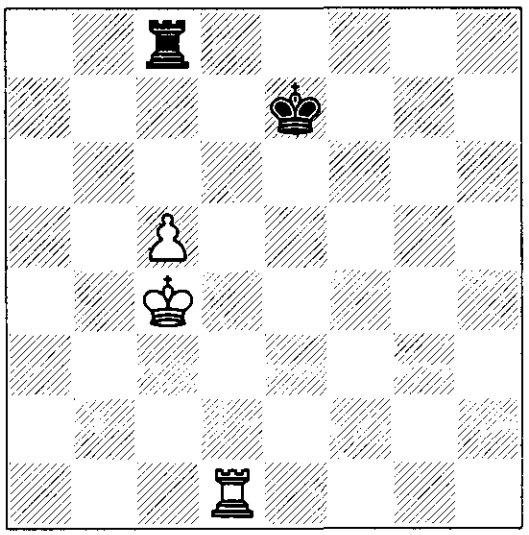
367 +/–

(**367**): Black's rook must stay on the b-file or White's king advances to b5 and c6, but after 1...♖b2 2 c6 ♖c2+ (2...♖b1 3 ♔c5) 3 ♔b5 ♔d5 4 ♔b6 ♖b2+ 5 ♔c7 White wins easily.

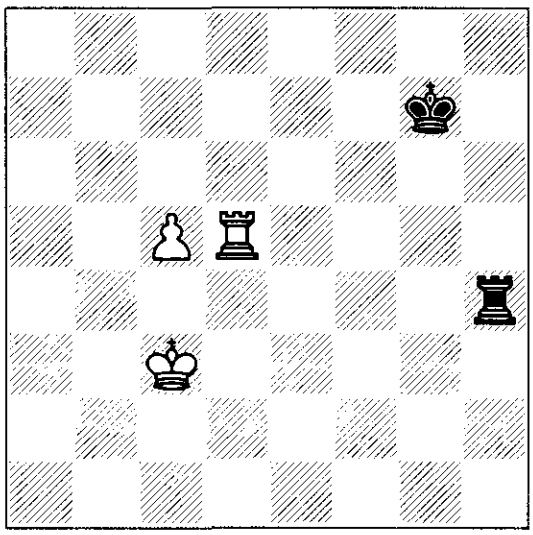
Moving White's rook to h7 and Black's king to e6 transforms the position into a draw, since White cannot make progress. If, however, White's rook is on b7 then he wins wherever Black's rook is.

### 3.3.4: Other situations

First of all we consider the case in which Black's king is cut off along a file. For the sake of completeness we give the main result again, even though it is identical to diagram 215.



368 +/=



369 +/=

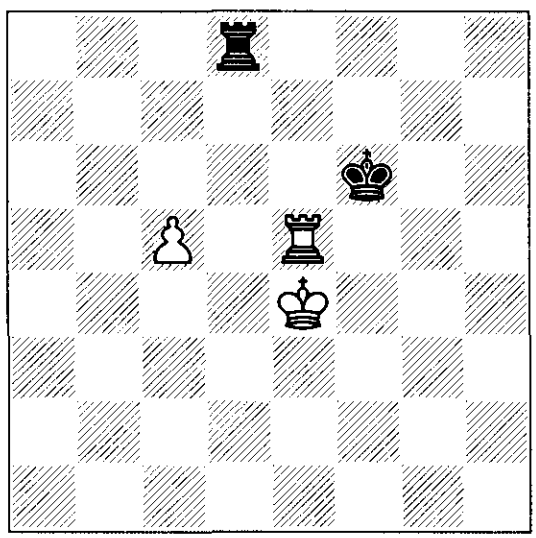
*Original*

**(368):** Black to play can draw by 1...♖d8! and his king moves in front of the pawn. White to play can win by 1 ♔b5 ♖b8+ (1...♖d8 2 ♖xd8 ♔xd8 3 ♔b6) 2 ♔c6 ♖c8+ 3 ♔b6 ♖b8+ 4 ♔c7 and the Lucena position is unavoidable. Moving Black's king to e6 deprives him of the ...♖d8 defence, with the result that White wins whoever is to play.

Almost all the other positions from section 2.3.2 remain unaltered when they are shifted a file to the right, but one position is significantly changed.

**(369):** This is diagram 219 shifted to the right. In diagram 219 Black to play lost, but he can draw with a c-pawn. The analysis runs 1...♔f6! (not 1...♔f7? 2 ♖e5! ♔f6 3 ♖e3 ♔f7 4 ♔b3 threatening c6, so Black must move his rook from h4, allowing the white king to advance) 2 ♖d7 ♔e6! (2...♔e5? 3 ♖d8 ♖g4 4 ♔b3 again threatens c6, so Black must abandon the fourth rank) 3 c6 ♖a4! (this is the move which did not exist with a b-pawn; 3...♖g4 4 ♖d8 wins) 4 ♖d8 ♖a6! and now the difference is clear; attacking the pawn from the other side simply wins the pawn!

In the following reciprocal zugzwang, Black's king is cut off along a file, but White's king is not supporting the pawn.

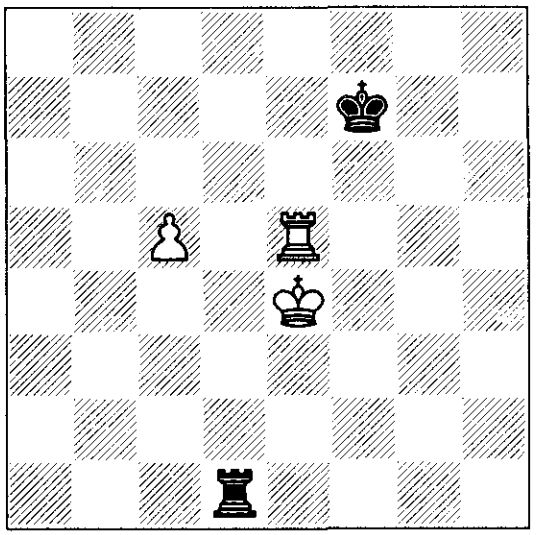


370 =/–

*Original*

**(370):** This is closely related to the reciprocal zugzwang of diagram 222 (W♔d4, ♖d5, ♙b5 v B♔e7, ♖c1). Our

task is not only to explain why diagram 370 is reciprocal zugzwang, but also to find out why the shift to the right has changed the evaluation.



370a +/–

*Original*

**(370a):** This subsidiary position is 222 shifted to the right. It is no longer reciprocal zugzwang because White to play wins by 1 c6! ♔f6 (1...♖d8 2 ♖d5! wins after 2...♖c8 3 ♖d6! ♖h8 4 ♔d5 ♖h5+ 5 ♔c4 ♖h1 6 ♔b5 or 2...♔e7 3 ♔e5 ♖h8 4 ♖d7+ ♔e8 5 ♔d6) 2 ♖c5! ♖e1+ 3 ♔d4 ♖d1+ 4 ♔c4 ♔e7 (the point is that after 4...♖c1+ 5 ♔b5 ♖b1+ White can win by making use of the a-file with 6 ♔a6; note that 4...♔e6 loses to 5 ♔b5 ♖b1+ 6 ♔a6) 5 ♖d5! ♖b1 6 ♔c5 ♖c1+ 7 ♔b6 reaching the Lucena position.

Now we return to consider diagram 370 with Black to play:

1) **1...♖d1** 2 ♖d5! ♖e1+ (2...♖c1 3 ♖d6+! and 4 ♔d5) 3 ♔d4! (3 ♔d3? ♖c1! draws) ♔e7 (3...♔e6 4 ♖d6+ and ♔d5 again, or 3...♖d1+ 4 ♔c4) 4 ♔c4! (threat ♔b5) ♖b1 5 c6 and wins.

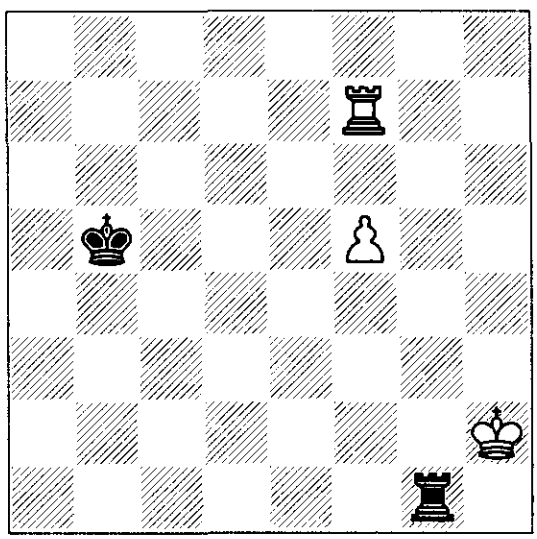
2) **1...♖d7** 2 c6! ♖d1 (2...♖c7 3 ♖h5! ♔e6 4 ♖h6+! ♔e7 5 ♔d5 wins) 3 ♖c5! winning as in diagram 370a above. However, this win makes use of the a-file, so diagram 370 shifted to the left (W♔d4, ♖d5, ♙b5 v B♔e7, ♖c1) is drawn even with Black to move, because he plays 1...♖c7! 2 b6 ♖c1! transposing to line W1 of diagram 222.

3) **1...♖a8** 2 ♔d4! ♖a1 (2...♖d8+ 3 ♖d5! ♖c8 4 ♔c4 ♔e6 5 ♖d1 ♔e7 6 ♔b5 wins) 3 ♖e3 ♖d1+ 4 ♔c4 and the king advances.

4) **1...♔f7** 2 c6! wins after 2...♖d1 3 ♖c5!, 2...♔f6 3 ♖d5! (see diagram 370a) or 2...♖c8 3 ♔d5!.

White to move has no winning prospects at all, for example 1 ♖d5 (1 c6 ♖c8 2 ♖c5 ♔e6 wins the pawn) ♔e7! 2 c6 (2 ♔d4 ♖xd5+) ♖c8.

It is now time for a practical example.



371 /=

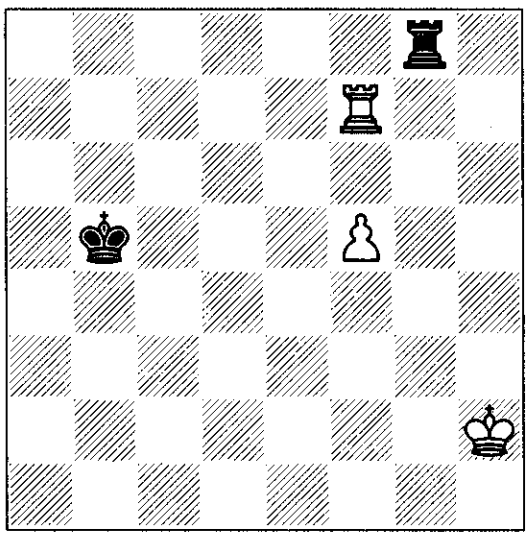
**Sveshnikov – Kuzmin**

*USSR 1st League, 1980*

**(371):** Black may play:

1) **1...♖g4?** (trying to cut off the white king; 1...♖f1? 2 ♔g3 loses without a fight) 2 ♔h3 ♖e4 3 f6 ♔c6 4 ♔g3! ♔d6 (4...♖e1 5 ♔g4 ♖f1 6 ♔g5 ♖g1+ 7 ♔h6 ♖h1+ 8 ♔g7 ♖g1+ 9 ♔h8 ♖f1 10 ♖f8 ♔d7 11 ♔g7 ♖g1+ 12 ♔f7! heads for the Lucena position) 5 ♖f8! ♖e5 (5...♖e1 loses to 6 ♖d8+ followed by f7) 6 ♔f4! (preventing ...♔e6) ♖a5 7 ♖e8! with a simple win.

2) **1...♖g8!** *(D)* and now:



371a =/=

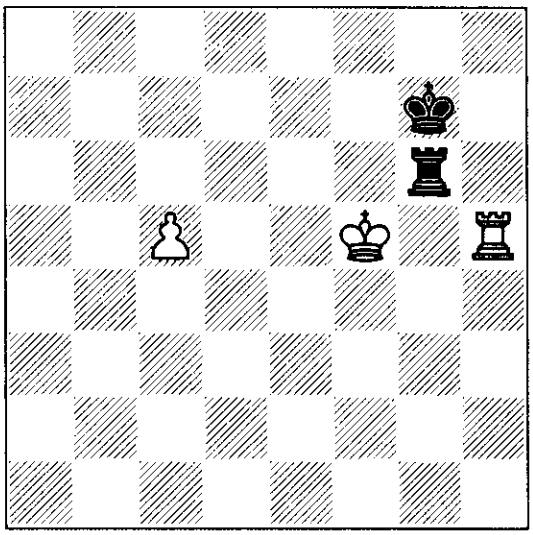
2a) **2 ♖e7** leads to a further branch:

2a1) **2...♖f8?** (in *ECE* Beliavsky incorrectly claimed that this leads to a draw) 3 ♖e5+! ♔c6 4 ♔g3! (White needs to defend his rook at move 6) ♔d7 5 ♔f4! ♖e8 6 f6! (Beliavsky only gave 6 ♖a5?) followed by ♔f5 winning easily.

2a2) **2...♖g5?** 3 ♖e5+! ♔c6 4 ♔h3! wins as in the game (see below).

2a3) **2...♔c6** (or 2...♔c5) 3 ♔h3 ♔d6 transposes to line 2b.

2b) **2 ♔h3** ♔c5 3 ♖e7 (3 ♖d7 ♔c6! 4 ♖d1 ♖g5! draws) ♔d6! (in the game Black played 3...♖g5? and lost after 4 ♖e5+! ♔d6 5 ♔h4! ♖g1 6 ♖e2 ♔d7 7 ♔h5 ♖g8 8 ♔h6 1-0) 4 ♖e6+ ♔d7! (4...♔d5? 5 ♔h4! wins) 5 ♔h4 ♖e8! 6 ♖a6 ♔e7 7 ♔g5 ♖g8+ 8 ♖g6 ♖a8 drawing.



372 =/–

*Original*

**(372):** Suppose Black is to move:

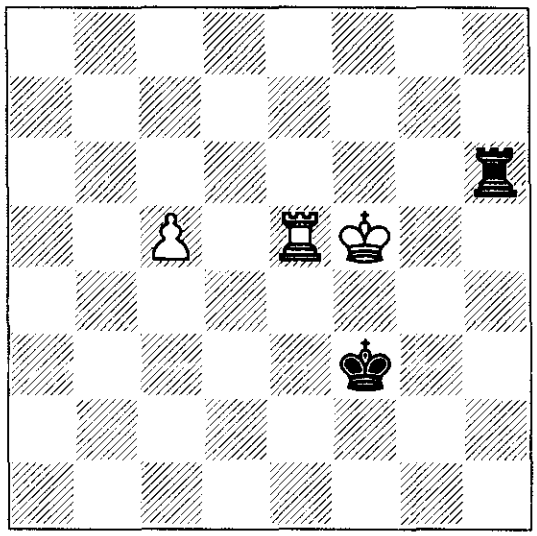
1) **1...♖c6** (1...♖g1 2 ♔e6 is easy) 2 ♔e4! ♔g6 (or else an immediate ♔d5 wins) 3 ♖d5 ♔f6 4 ♔d4 ♔e7 (4...♔e6 5 ♔c4 ♖c8 6 ♖d1 is the same) 5 ♔c4 ♖c8 6 ♔b5 and wins.

2) **1...♖a6** 2 ♔e4! (2 ♔e5? ♔f7 3 ♔d5 ♔e7 draws) ♔f7 3 ♖e5! followed by ♔d5 winning.

With White to play, 1 ♔e4 (1 ♔e5 ♔f7 and the king moves in front of the pawn, or 1 ♖h1 ♖c6! 2 ♖c1 ♔f7 draws) ♔f6! (1...♔f7? 2 ♖e5! wins) 2 ♖e5 (2 ♖h7 ♔e6!) ♖g1 and White's pieces are in a tangle.

The remaining positions of reciprocal zugzwang are closely related to diagrams 224-226. We give the conclusions here, pointing out the one minor

difference, and refer the reader back to section 2.3.3 for the detailed analysis. All these positions are ultimately derived from the reciprocal zugzwang W♔e5, ♖d5, ♙c5 v B♔e3, ♖c6 (which in turn goes right back to diagram 22; in passing, it is worth mentioning that this position may be reflected about the c-file to give a second reciprocal zugzwang W♔a5, ♖b5, ♙c5 v B♔a3, ♖c6). Just as with the b-pawn, this gives rise to a family of reciprocal zugzwangs obtained by moving the kings to the right (W♔f5 v B♔f3 or W♔g5 v B♔g3). Just as with the b-pawn, the position with W♔h5 v B♔h3 is a win even with White to move (1 ♖g5!). Shifting diagram 224 to the right gives W♔g5, ♖f5, ♙c5 v B♔g3, ♖e6, preserving the reciprocal zugzwang. The following position represents the only real difference.



373 =/–

*Original*

**(373):** Black could draw in the b-pawn situation because he had the waiting move ...♖h6. Here, however, he is in zugzwang (the same thing happened in diagram 331). Black to play can only try 1...♖c6 (1...♖a6 2 ♖e6 ♖a5 3 ♖c6 ♔e3 4 ♔e5! ♔d3 5 ♔d5 ♔c3 6 ♖b6, followed by ♔d6 and c6), but then 2 ♖d5! ♔e3 3 ♔e5! is the reciprocal zugzwang mentioned above.

There are 11 positions of reciprocal zugzwang in the ending of ♖+♙c5 v ♖. Five are mentioned before diagram 373. Diagrams 365, 366, 370, 372 and 373 add another five. The last one is W♔b5, ♖b8, ♙c5 v B♔d7, ♖c7, which is just diagram 233 shifted to the right.

**Practical tips:** Diagrams 355 and 357-362 are the most important. The positions with Black's king on the short side are well worth knowing because they often arise from the common ending of ♖+f♙+h♙ v ♖.

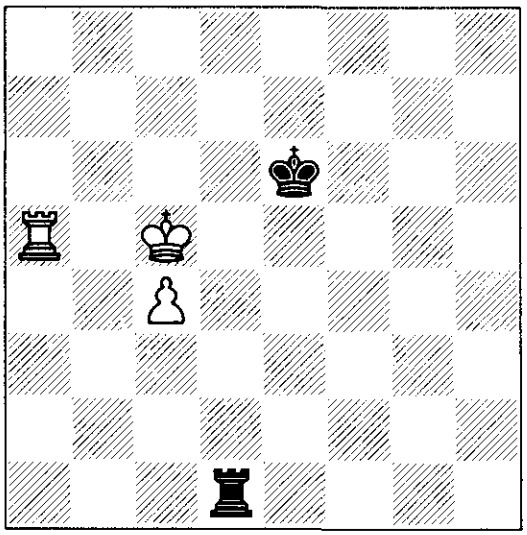
## 3.4: Pawn on the fourth rank

As usual, there is a further division:

3.4.1: Black's king is cut off along a rank 221
3.4.2: Black's king is cut off along a file 222
3.4.3: As 3.4.2, but with White's king cut off along a rank 224
3.4.4: Other situations 228

### 3.4.1: Black's king is cut off along a rank

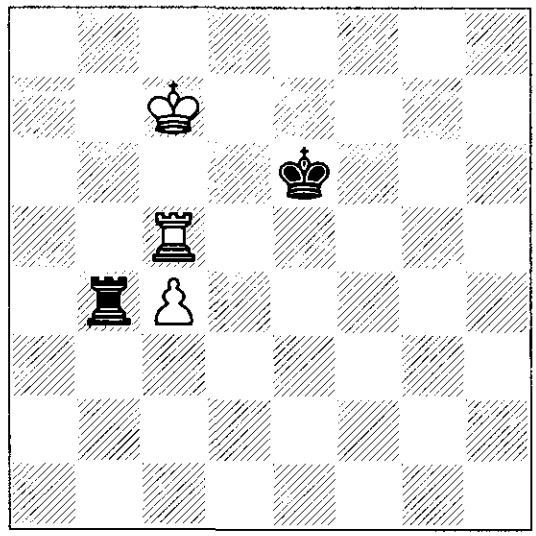
The important results are the same as in section 2.4.3. Shifting diagram 257 to the right gives the position W♔c3, ♖h6, ♙c4 v B♔e5, ♖c8. This is again a win with White to play (1 ♖b6) and a draw with Black to play (1...♖b8!). Occupation of the important b-file decides the result of the game. If White's rook is operating on the fifth rank (W♔c3, ♖h5, ♙c4 v B♔e4, ♖c8) then White wins whoever is to move, just as in diagram 259. We content ourselves with two examples.



374 +/=

**Pfleger – Westerinen**
*Tallinn, 1973*

**(374):** This is analogous to diagram 261. Black to play draws by 1...♔d7!, so we take White to play, as in the game. 1 ♖a7! ♖c1 (or 1...♖d2 2 ♔b5 forcing the pawn to c5) 2 ♖c7 ♖c2 3 ♔b6 ♖b2+ (3...♔d6 4 c5+ ♔d5 5 ♖d7+! ♔e6 6 c6 wins) 4 ♔c6 ♖b1 5 c5 ♖c1 6 ♖h7 ♖c2 7 ♔b6 ♔d5 8 ♖h5+ ♔e6 9 c6 ♔d6 10 ♖h6+! ♔e7 11 ♖h7+ ♔d6 12 ♖d7+ ♔e6 13 ♖d1 (White forces the Lucena position) ♖b2+ 14 ♔c7 ♖e2 15 ♖b1 ♖c2 16 ♖e1+ ♔f7 17 ♖e4 1-0.



375 =/–

*Original*

**(375):** This is diagram 239 shifted to the right. It remains reciprocal zugzwang even though Black's rook has some extra space. Firstly suppose that White is to play. After 1 ♔c6 (1 ♖c6+ ♔e5! 2 c5 ♔d5 leads to an instant draw) Black may try:

1) **1...♖a4?** (gives White's king some air) 2 ♔b7! ♔e7 (after 2...♖b4+, 3 ♔c7! transfers the move to Black, while 2...♖a1 3 ♖h5 ♔d7 4 ♖d5+! ♔e6 5 ♔c6 ♖a6+ 6 ♔b5 ♖a8 7 ♖d4 wins as in diagram 378 below) 3 ♖e5+ ♔d6 (3...♔f6 4 ♖e4 ♔f5 5 ♖d4 ♔e5 6 ♖h4 wins as in the main line) 4 ♖d5+! ♔e6 5 ♖d4 ♔e5 6 ♖h4 ♖b4+ 7 ♔c6 is followed by a rook check and c5.

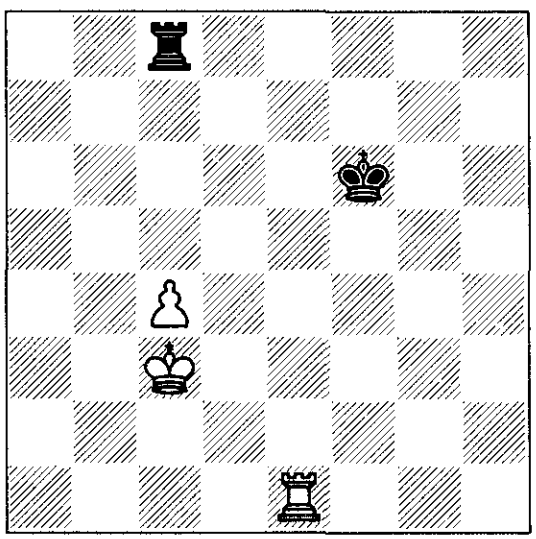
2) **1...♖b8!** (1...♔e7? 2 ♖e5+! ♔d8 3 c5 ♖h4 4 ♖g5 ♖h6+ 5 ♔b7! ♖h7+ 6 ♔b8 wins) 2 ♖d5 (2 ♖h5 ♖c8+! 3

♔b5 ♔d7 draws, but not 3...♔d6? 4 c5+! ♔c7 5 ♖h7+! ♔b8 6 ♔b6! winning) ♖c8+! 3 ♔b5 ♖b8+! (3...♖h8? 4 ♖d4 wins) 4 ♔c5 ♖c8+! draws.

Black to play cannot maintain the bind, for example 1...♖a4 (1...♔e7 2 ♖c6 ♖b1 3 c5 wins as in diagram 239) 2 ♖c6+! ♔e5 (2...♔e7 3 c5) 3 ♔b6! (this exploits the absence of the rook from b4) ♖b4+ (3...♔d4 4 ♔b5! ♖a1 5 ♖d6+! ♔e5 6 c5 wins) 4 ♔c5 ♖b8 (4...♖b1 5 ♖c7 wins as in the previous diagram) 5 ♖b6 ♖h8 6 ♔b5 and the pawn proceeds.

### 3.4.2: Black's king is cut off along a file

We need to cover this case in some detail because the results differ from those in chapter 2. In diagram 241 we saw that with a b-pawn the result is generally a draw when Black's king is cut off by two files. In the c-pawn situation, a two-file cut-off always wins.

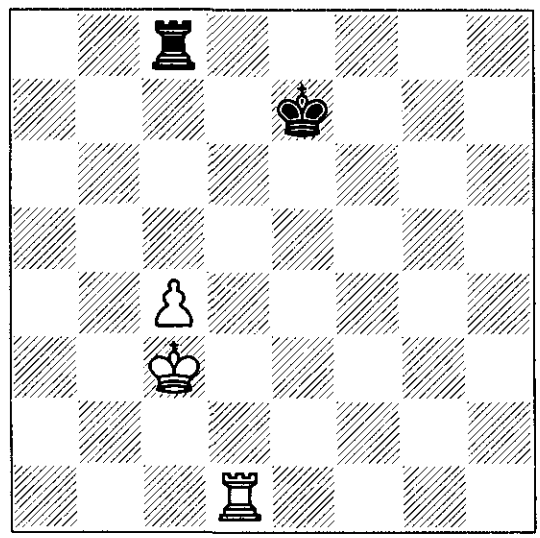


376 +/–

*Chéron, 1923*

(**376**): It makes no difference who is to move, so suppose that White is to play. 1 ♔b4 ♖b8+ 2 ♔a5 (this possibility didn't exist with the b-pawn) ♖c8 (after 2...♖a8+ 3 ♔b6 White advances his pawn without using the rook) 3 ♖c1 (quickest, although more cautious players might prefer to play 3 ♔b5 ♖b8+ 4 ♔a6 ♖c8 5 ♖c1) ♔e6 (3...♖c6 4 ♔b5) 4 ♔b6! ♖b8+ (4...♔d7 5 ♖d1+! followed by c5) 5 ♔c7 followed by c5 wins.

The situation is more complex when Black's king is cut off by just one file. In this case the result depends on Black's king position.



377 +/=

*Original*

(**377**): White to play wins by 1 ♔b4! ♖b8+ 2 ♔a5 ♖c8 3 ♖d4 (again it is also possible to play ♔b5 and ♔a6 first) ♔e6 (it takes too long to dislodge White's rook) 4 ♔b6! ♔e5 (4...♖b8+ 5 ♔c7) 5 ♖h4 (threat c5) ♖b8+ 6 ♔c7 ♖b4 7 ♖h5+ ♔e6 8 c5 and so on. Black to play has three drawing moves and it is worth looking at all three:

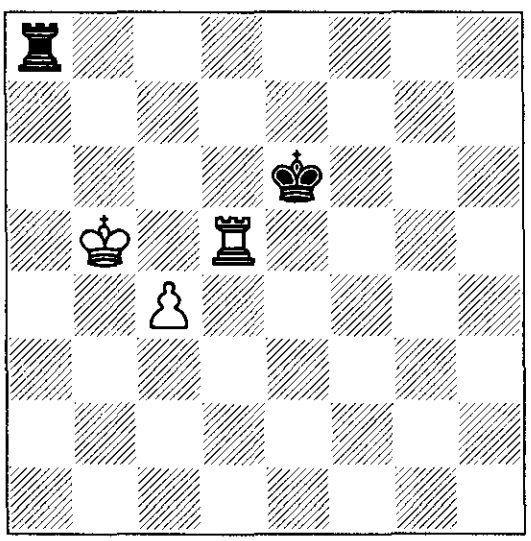
1) **1...♔e6** 2 ♔b4 (White can only try the same manoeuvre, but Black draws because his king is nearer e5) ♖b8+! 3 ♔a5 ♖c8! 4 ♔b5 ♖b8+! 5 ♔a6 ♖c8! 6 ♖d4 ♔e5! 7 ♖d5+ (7 ♖h4 ♔d6) ♔e6! 8 ♔b5 ♖b8+! 9 ♔a4 ♖c8 10 ♔b4 ♖b8+ 11 ♖b5 ♖h8 12 ♖b7 ♔d6 13 ♔b5 ♖h5+ 14 ♔b6 ♖c5! draws.

2) **1...♖d8** 2 ♖xd8 ♔xd8 3 ♔b4 ♔c8! and whenever White's king advances to the fifth rank Black can take the opposition.

3) **1...♖b8** (preventing ♔b4 also draws) 2 c5 ♖d8 is also a straightforward method.

The result is unchanged if we move Black's rook to a8, e8, f8, g8 or h8 in diagram 377, because Black to play may still draw by 1...♖d8 (or 1...♖b8) while White to move wins by 1 ♔b4.

Black's king is better placed on e6, as shown by line 1 above. In this case White can only win with a favourable initial position.



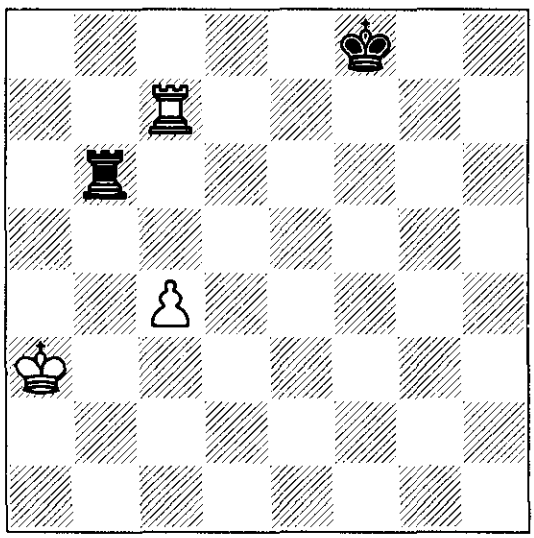
378 +/=

*Original*

**(378):** White to play wins by 1 ♖d4 (after 1 ♖d1 ♖b8+! Black draws as in line 1 of the previous diagram) ♖b8+ (1...♔e5 2 ♖h4 is basically the same) 2 ♔c6 ♔e5 (2...♖c8+ 3 ♔b7 ♖c5 4 ♔b6! wins) 3 ♖h4 ♖b4 4 ♖h5+ followed by c5. Black to play draws by 1...♖b8+ as in line 1 of the previous diagram.

Moving Black's king to e5 maintains the draw, but when Black's king is on e4 White to play can normally win by occupying the fifth rank with his rook, cutting off Black's king and winning as in diagram 259.

We end with a practical example.



379 +/

**Ivanović – de Firmian**

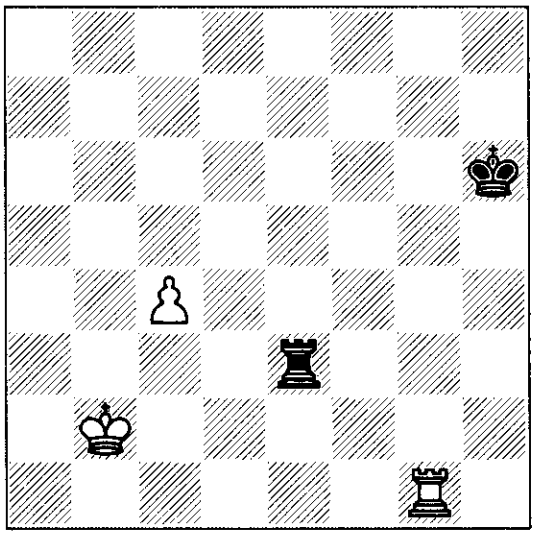
*Vršac, 1983*

**(379):** White's only hope is to cut off Black's king along a file, so the first move is forced. 1 ♖d7! ♔e8 2 ♖d5 (the other squares on the d-file also win, but this is quickest) ♖b8 3 ♔a4! (Black threatened ...♖d8, so this is also forced) ♔e7 (3...♖a8+ 4 ♔b5 ♖b8+ 5 ♔a6 ♖c8 loses to 6 c5, but

now Black threatens to draw by ...♔e6 followed by frontal checks) 4 ♖d4 (4 ♔a5? ♔e6! and 4 c5? ♖d8 are draws) ♔e6 (4...♖c8 5 ♔b5 wins as in diagram 377) 5 c5! (this wins now that Black cannot play ...♖d8) ♔e5 6 ♖d1 1-0.

### 3.4.3: Black's king is cut off along a file and White's king is cut off along a rank

We take the case in which Black's rook operates along the third rank. White always wins when Black's king is cut off by four files.



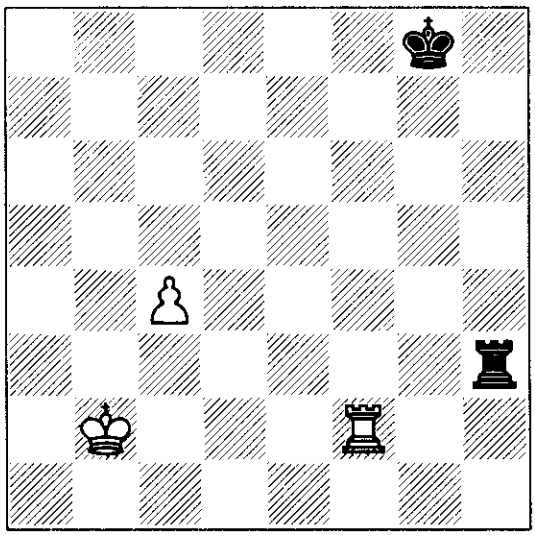
380 +/–

*Chéron, 1944*

(**380**): We suppose that Black is to play: 1...♖f3 2 c5 ♖f5 3 ♖c1 ♔g6 4 c6 ♖f8 5 c7 ♖c8 6 ♔b3 and White is in time to defend the pawn.

As with the b-pawn, the critical case is when Black's king is cut off by three files.

The tables at the top of the next page give a summary of the results. Comparison with the table on page 149 shows that when Black's king is on g5, g6 or g7 the results are the same as those for the b-pawn. We therefore concentrate mainly on the cases of B♔g4 and B♔g8, where there are significant differences.



381 +/=

*Chéron, 1944*

(**381**): White to play wins by 1 c5! ♖h5 2 c6! ♖b5+ 3 ♔a3! (making use of the extra queenside file; 3 ♔c1? draws after 3...♖b8!) ♖c5 4 ♖f6! ♔g7 5 ♔b4 ♖c1 6 ♖d6 ♔f7 7 ♔b5 ♔e7 8 ♖d2 with an easy win. Black to play draws by 1...♔g7! (taking f6 away from White's rook) 2 c5 ♖h5! 3 ♖c2 (3 c6 ♖b5+! 4 ♔c1 ♖b8 draws) ♔f7 4 c6 ♖h8! 5 ♔b3 ♔e7 6 ♔b4 ♔d6 followed by ...♔c7. The White to play win only works when White's king is on b2 because on c2 or d2 the king blocks the rook and 1 c5 simply loses the pawn after 1...♖h5 2 c6 ♖h6 3 c7 ♖c6.

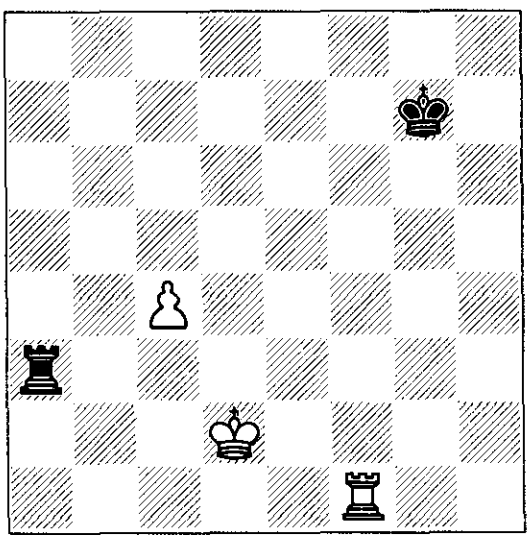
We pointed out above that Black draws when his king is on g7, but some cases require very accurate defence.

**In all cases W♙c4 and B♖h3: W=White to play B=Black to play**

| B♔g4 | W♖f1 | W♖f2 |
|---|---|---|
| W♔b2 | W: Win: (1 c5 or 1 ♖f2)<br>B: Loss | W: Win: (1 c5 or 1 ♖f1)<br>B: Loss |
| W♔c2 | W: Win: (1 ♔b2 or 1 ♔d2)<br>B: Draw: (1...♔g5!) | W: Win: (1 ♔b2!)<br>B: Draw: (1...♔g5 or 1...♖e3) |
| W♔d2 | W: Win: (1 c5!)<br>B: Loss | W: Win: (1 ♖f1!)<br>B: Draw: (1...♔g5/♖a3/♖b3) |

| B♔g5 | W♖f1 | W♖f2 |
|---|---|---|
| W♔b2 | W: Win: (1 c5!)<br>B: Draw (1...♔g6/♖d3/♖e3) | W: Win: (1 c5!)<br>B: Draw (1...♔g6/♖d3/♖e3) |
| W♔c2 | Draw | Draw |
| W♔d2 | W: Win: (1 c5!)<br>B: Draw (1...♔g6/♖a3/♖b3) | Draw |

**B♔g6 or g7: Always drawn**
**B♔g8: W♔b2: W♖f1 or f2: W: Win (1 c5!) B: Draw (1...♔g7!)**
**W♔c2, d2: Always drawn**



382 =/=

*Chéron, 1944*

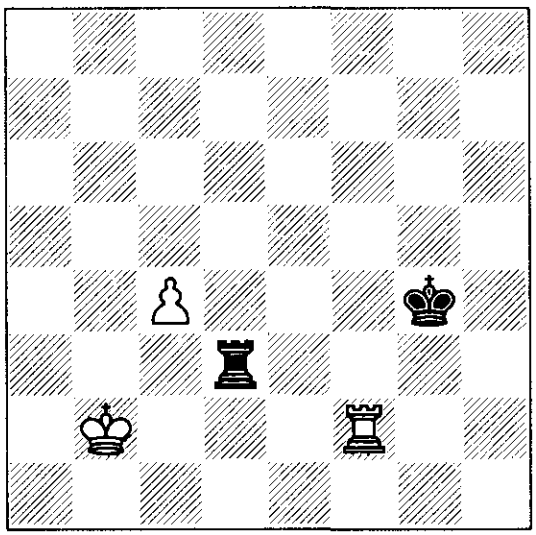
(**382**): We take White to play. 1 c5 (threat 2 c6) ♖a5! 2 ♖f5 and now:

1) **2...♔g6?** 3 ♖d5! ♔f6 (3...♖a3 4 c6 ♖a8 5 ♔c3 ♖c8 6 ♖d6+! ♔f7 7 ♔d4 wins) 4 ♔c3! ♖a4 (4...♔e6 5 ♖d6+! ♔e7 6 ♔b4 wins) 5 ♔b3! (not 5 c6? ♔e7! drawing) ♖h4 6 ♖d7! (6 c6? ♔e7! still draws) ♖e4 (6...♔e6 7 c6! and 6...♔e5 7 ♖d8 are wins) 7 c6! ♖e6 (7...♖e1 8 ♔b4) 8 c7! ♖c6 9 ♖d6+! wins.

2) **2...♖a3!** 3 c6 ♖a8! (3...♖a7? 4 ♔c3 ♖c7 5 ♖c5! ♔f6 6 ♔b4 ♔e7 7 ♔b5 followed by ♔b6 and wins) 4

♔c3 ♖c8! 5 ♖c5 ♔f7 6 ♔b4 ♔e7 7 ♔b5 ♔d6! (7...♔d8? 8 ♖d5+! ♔c7 9 ♖d7+! ♔b8 10 ♔b6 wins) 8 ♔b6 ♖b8+! draws.

The most complex case arises when Black's king is on g4.

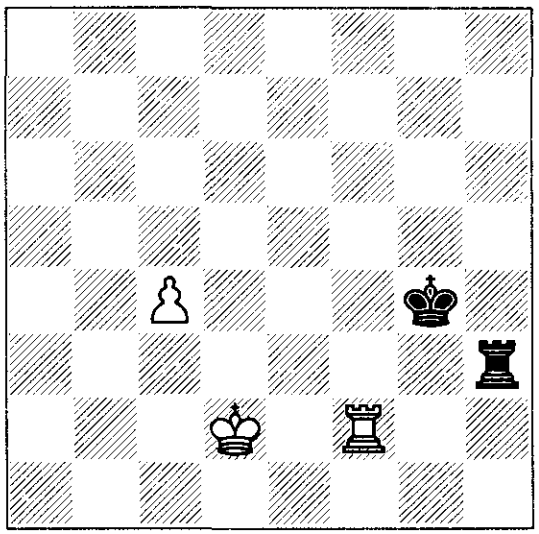


383 +/=

*Chéron, 1944*

(**383**): White to play wins by 1 c5! ♖d5 (1...♔g3 loses to 2 ♖c2) 2 c6! (2 ♖c2? ♔f5! 3 ♔b3 ♔e6! 4 c6 ♖d8! 5 ♔b4 ♔d6! draws) ♖b5+ (2...♖c5 3 ♖c2!) 3 ♔a3! (once again White needs the a-file in order to win) ♖c5 4 ♖f6! ♔g5 5 ♔b4 ♖c1 6 ♖d6 ♔f5 7 ♔b5 ♔e5 8 ♖h6 (or 8 ♖d2) and wins. Black to play draws by 1...♔g5! (once again Black must prevent ♖f6) 2 c5 ♖d5! 3 ♖c2 ♔f6 transposing to 2 ♖c2 in the white to play analysis. The variations are the same if White's rook starts on f1.

Suppose now that Black's rook starts on h3. Then White to play wins by 1 c5 just as above. But Black to play loses after 1...♔g5 (1...♔g3 2 ♖f6 ♔g4 3 c5 wins) 2 c5! ♔g6 (the king blocks a sideways attack on the pawn by Black's rook) 3 c6! ♖h8 4 ♔b3 ♖c8 5 ♖c2! ♔f6 6 ♔b4 ♔e7 7 ♔c5 with an easy win.



384 +/=

*Chéron, 1944*

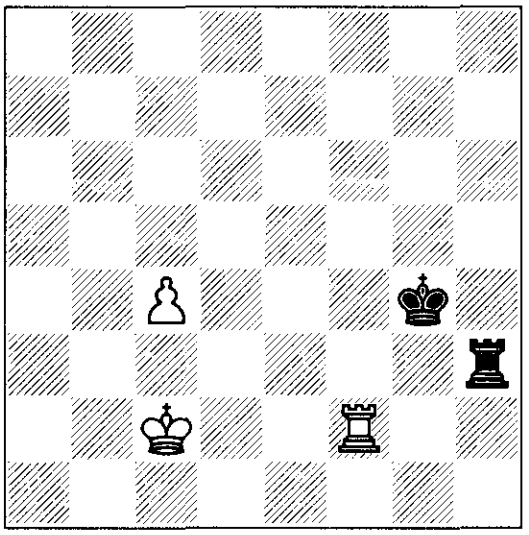
(**384**): First of all suppose White is to play.

1) **1 c5?** ♖h5! (1...♔g5? fails to 2 ♖f8 ♔g6 3 c6! ♖h7 4 ♖c8! followed by c7) 2 c6 ♖c5 3 ♖f6 ♔g5! and with the b-pawn White could play his rook to the right, but now he misses the h-file! White is forced to move his rook to a square which gives Black a free tempo and this deprives him of a win after 4 ♖d6 ♔f5 5 ♔d3 ♔e5!.

2) **1 ♖f1!** (now White can switch his rook behind the pawn) ♔g5 (1...♖a3 is also met by 2 c5!) 2 c5! ♔g6 3 c6! ♖h5 4 ♖c1! ♖h8 5 ♔c3 ♔f6 6 ♔c4! (not 6 ♔b4? ♔e7! 7 ♖d1 ♖d8! and White cannot play ♖d5) ♔e7 (6...♔e6 7 ♔c5 is a simple win) 7 ♖d1! ♖d8 8 ♖d5! ♖b8 9 ♔c5 and wins.

With Black to play, 1...♔g5! 2 c5 ♖a3 3 ♖f1 (3 c6 ♖a6! 4 c7 ♖c6 5 ♖f7

♔g6 6 ♖d7 ♔f5 draws) ♖a5! 4 ♖c1 (4 c6 ♖d5+!) ♔f6 5 c6 ♖a8 6 ♔c3 ♔e6 7 ♔c4 ♔d6! draws.



385 +/=

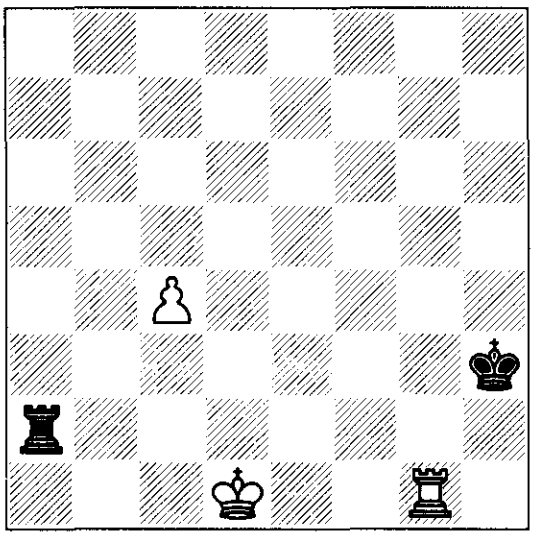
*Chéron, 1944*

**(385):** White to play wins by 1 ♔b2! reaching diagram 383. Black to play draws by 1...♔g5 or 1...♖e3 2 ♔b2 ♔g5!, but not 1...♖a3? 2 ♔b2! ♖d3 3 c5! as in diagram 383.

When Black's rook is on the second rank, White needs a very favourable position to win. Black's king must be cut off on the h-file for White to have any winning chances at all, and even then Black is only in danger if his king is a long way up the board. We consider two marginal cases.

**(386):** White's rook must leave the first rank, but which square should it move to?

1) **1 ♖g5?** ♔h4! 2 ♖d5 ♔g4! (not 2...♔g3? 3 ♖d2! ♖a4 4 ♖d4! ♖a2 5 c5! ♔f3 6 c6 ♖a8 7 ♔d2 and Black's king is cut off) 3 c5 (3 ♖d2 ♖a4 draws) ♔f4 4 c6 ♖a8! (4...♔e4? 5 c7! wins) 5 ♔c2 ♔e4! draws.



386 +/

*Original*

2) **1 ♖g7?** ♔h4! 2 c5 ♖a8 (not 2...♖a6? 3 ♖d7! winning) 3 c6 ♖c8 4 c7 ♔h5! 5 ♔d2 ♔h6! 6 ♖d7 ♔g6 and Black reaches e6 in time.

3) **1 ♖g8!** and now:

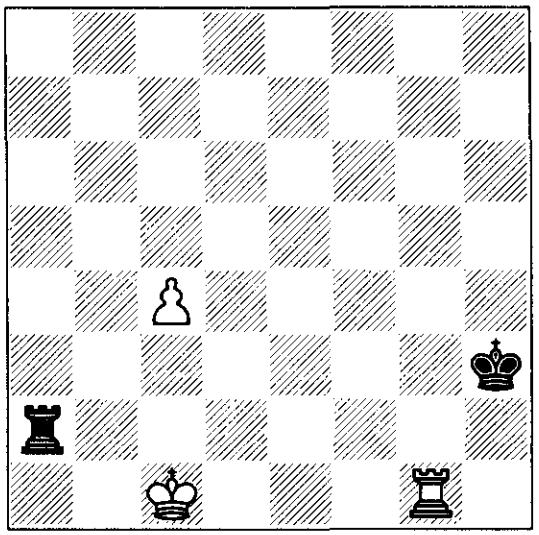
3a) **1...♔h4** 2 c5! ♖a7 (2...♖a5 3 c6 wins) 3 ♖c8! ♔g5 4 c6! ♖f7 5 c7 ♔f5 6 ♔c2 and White wins by advancing his king.

3b) **1...♖a4** 2 c5! (2 ♖c8? ♔g4! 3 ♔c2 ♖a3! draws as in diagram 387 below) ♖c4 3 ♖g5! (3 ♖c8? ♔g4! 4 ♔d2 ♔f5! 5 ♔d3 ♖c1! 6 ♔d4 ♔e6 and draws) ♔h4 4 ♖d5 ♔g4 5 ♔d2 ♔f4 6 ♔d3 ♖c1 7 ♔d4! (threat ♖d6 followed by ♔d5) ♖d1+ 8 ♔c4! ♖c1+ 9 ♔b5 and wins.

**(387):** Moving White's king to c1 changes the play completely. The lines are:

1) **1 ♖g8?** and now:

1a) **1...♖a4** 2 ♖c8! ♔g4 3 ♔b2! (not 3 ♔c2? ♖a3! 4 ♔b2 and now 4...♖e3 5 c5 ♔f5 6 c6 ♖e7! and 4...♖h3 5 c5 ♔f5 draw, but not 4...♖d3? or 4...♖f3?, when 5 c5! wins because the



387 +/

*Original*

black king and rook are skewered from the eighth rank) ♔f5 4 ♔b3 ♖a7 5 ♖e8 and wins.

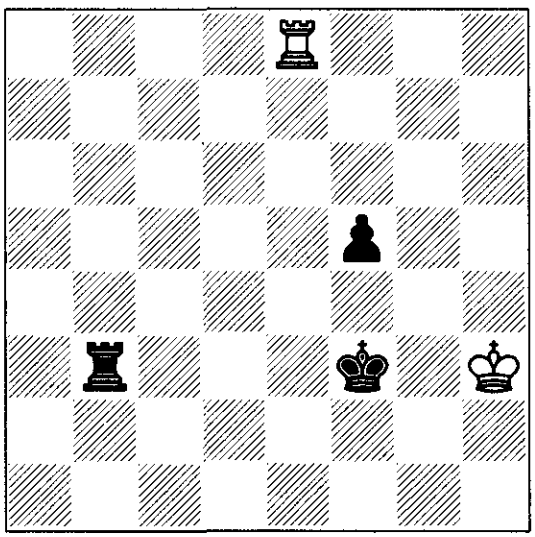
1b) **1...♔h4!** 2 ♔b1 (2 c5 ♖a5! 3 ♖c8 ♔g5 and now 4 ♔b2 ♔f6 5 ♔b3 ♔e7 6 ♔b4 ♖a1 or 4 c6 ♔f6 5 c7 ♖c5+! 6 ♔b2 ♔e7 with a draw in both cases) ♖e2! (the only move; 2...♖a4? loses to 3 ♖c8! as in line 1a, 2...♖d2? 3 c5! ♖d7 4 ♖c8! loses a crucial tempo when White plays c6 and 2...♖f2? 3 c5 ♖f7 4 ♖c8! ♔g5 5 c6! ♔f6 6 c7! leaves Black's king stuck one file too far away) 3 c5 ♖e7! 4 ♖c8 ♔g5 5 c6 ♔f6 6 c7 ♔e6 and Black's rook is on just the right file to allow his king to approach the pawn.

2) **1 ♔b1!** ♖a4 (1...♖e2 2 c5! ♖e6 3 ♖c1 ♖c6 4 ♖c4 wins easily) 2 ♖c1 ♔g4 3 ♔b2! (3 c5? ♔f5 draws) ♔f5 4 ♔b3! ♖a8 5 ♖e1! winning by diagram 376.

However, these two positions are exceptional. Moving Black's king from h3 to h4 would result in a draw in either case.

### 3.4.4: Other situations

In contrast to the previous sections in this chapter, we haven't said anything about the situation in which the defender's king is on the short side of the pawn. The reason is that even with the pawn on the fifth rank there were few winning chances for the superior side. Not surprisingly, the situation is even less promising with the pawn on the fourth rank and it is hard to find any winning positions at all. We therefore give only one example.



388 /=

**Alzate – Barus**

*Novi Sad Olympiad, 1990*

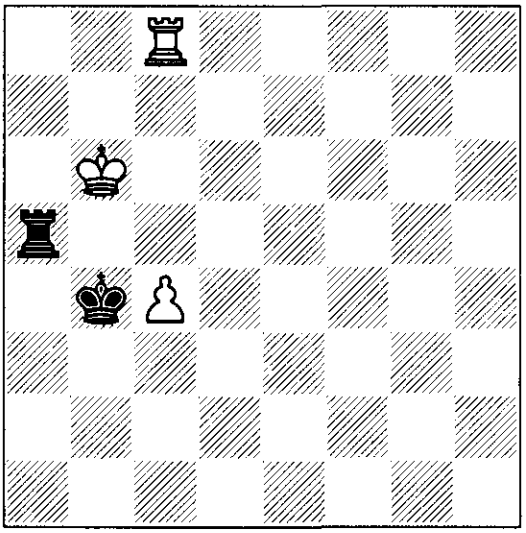
**(388):** Even in this relatively favourable position and with Black to play the position is still drawn. After 1...♔f2+ there are two possibilities:

1) **2 ♔h2?** (the game continuation) ♖b7 3 ♖h8 f4! 4 ♖h3 (if White's king were already on h3 then he could draw by playing ♖a8, but 4 ♔h3 is too slow and loses after 4...f3 5 ♖a8 ♖h7+! and 6...♔g2) f3 5 ♔h1 ♖g7 (5...♔e2

followed by ...f2 is simpler) 6 ♖h6 ♖e7 (6...♔f1 is quicker) 7 ♖h8 ♔e2 8 ♖a8 f2 (why not 8...♖h7+?) 9 ♖a2+ ♔f3 0-1.

2) **2 ♔h4!** f4 3 ♖a8 f3 4 ♔h3! ♖e3 5 ♖a1! drawing as in diagram 342 (with W♖b6).

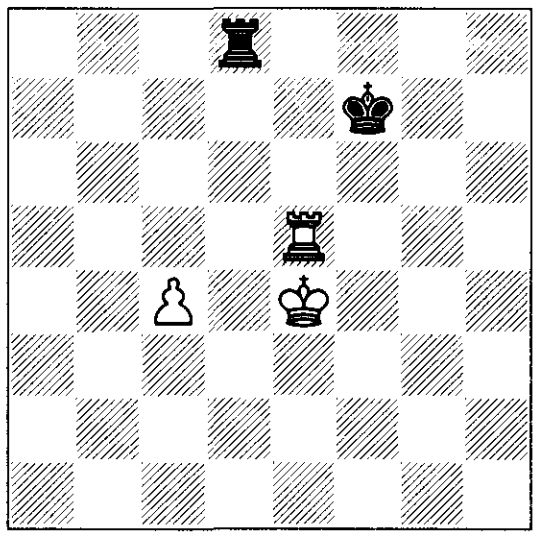
We saw one reciprocal zugzwang in diagram 375 and there are three more in the ending of ♖+♙c4 v ♖. The first is W♔b5, ♖b4, ♙c4 v B♔d4, ♖c1, which is diagram 269 shifted to the right. The analysis is unchanged. We now consider the remaining two positions.



389 =/–

*Original*

**(389):** With Black to move the situation is completely hopeless because White replies c5 no matter what Black plays, for example 1...♖a1 2 c5! ♖a5 3 c6! ♖b5+ 4 ♔c7!. White to play can only try 1 ♖c7 (1 c5 ♖b5+!), but this blocks the square c7 in the above line and allows Black to draw by 1...♖a1 2 c5 ♖a5! (threat 3...♖b5+) 3 c6 ♖b5+! 4 ♔a6 ♖a5+! (4...♔c5? 5 ♖b7!) 5 ♔b7 ♖b5+! 6 ♔c8 (6 ♔a8 ♔c5!) ♔c5! 7 ♔d7 ♖b6! 8 ♖c8 ♖a6! (8...♔d5? 9 ♖h8 wins) 9 c7 ♖d6+! 10 ♔e7 ♖c6! and Black reaches the reciprocal zugzwang mentioned after diagram 329 (with White to play).



390 =/–

*Original*

**(390):** This position is closely related to diagrams 222, 370 and 370a; during the analysis we shall frequently refer to the earlier positions. Firstly, suppose that Black is to play:

1) **1...♔f6** 2 c5! is diagram 370 with Black to play.

2) **1...♔f8** 2 c5 ♔f7 3 c6! is line 4 of diagram 370.

3) **1...♔g6** 2 ♖d5 ♖c8 3 ♔d4 ♔f6 4 c5 ♔e7 5 ♔c4 ♖d8 (or else White wins as in diagram 368) 6 c6! wins.

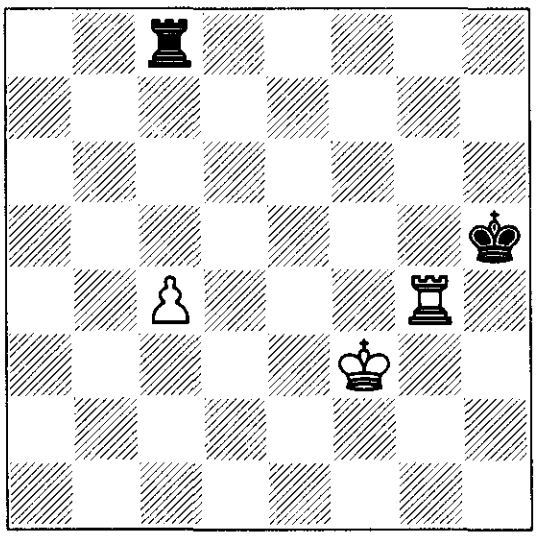
4) **1...♖d7** 2 c5 wins as 2...♔f6 3 c6! is line 2 of diagram 370, 2...♖d8 3 c6! is line 4 of diagram 370 and finally 2...♖d1 3 c6! is diagram 370a.

5) **1...♖d1** 2 c5 ♖d2 (2...♔f6 3 ♖d5! is line 1 of diagram 370) 3 c6! ♖d8 4 ♖d5! as in diagram 370a.

6) **1...♖a8** (or any other square on the eighth rank) 2 c5 ♔f6 3 ♔d4! as in line 3 of diagram 370.

The situation is simple when White is to play because 1 c5 ♔f6! is diagram 370 and 1 ♖d5 ♔e7 is an immediate draw.

We end with an intriguing position.



391 +/=

*Original*

**(391):** We will modify the position by moving Black's rook to different squares on the c-file.

**B♖c8:** The game is decided by occupation of the d-file. White to play wins by 1 ♖d4! (1 ♖e4? aims for a winning two-file cut-off, but Black draws by 1...♔g5 2 ♔e3 ♔f5! 3 ♔d3 ♖d8+! 4 ♖d4 ♖c8!) and now:

1) **1...♔g5/g6** 2 ♔e4! ♔f6 3 ♔d5! ♔e7 (3...♖d8+ 4 ♔c5! ♖c8+ 5 ♔b6 ♔e5 6 ♖h4 ♖b8+ 7 ♔c7 wins) 4 ♖h4 ♖d8+ (4...♖g8 5 ♔c6 ♔d8 6 c5 wins after 6...♖g6+ 7 ♔b7! ♖g7+ 8 ♔b6 or 6...♔c8 7 ♔b6 followed by c6) 5 ♔c5 ♖d1 6 ♖h7+ ♔d8 7 ♔c6!, followed by ♖h8+ and c5 winning.

2) **1...♖c5** 2 ♔e3 ♔g5 3 ♔d3, followed by ♖e4 with a winning two-file cut-off.

3) **1...♖e8** 2 ♖e4! (White gains a vital tempo) ♖d8 3 ♔f4 ♔g6 4 ♔e5! ♔f7 5 ♖h4 ♖d1 6 ♖d4! ♖b1 7 ♔d6 heading for the Lucena position.

Black to play can draw, but he must find 1...♖d8! (1...♖f8+? 2 ♖f4! ♖e8 3 ♖e4! wins as in line 3 above), when 2 ♖g1 (2 ♖e4 ♔g5 3 ♔e3 ♔f6 4 ♖d4 ♔e7 is simple enough) ♖c8! 3 ♖c1 ♔g5 4 ♔e4 ♔f6! 5 ♔d5 ♔e7! 6 ♖h1 ♖d8+! draws because White's rook is not defending the pawn, so his king cannot advance in response to Black's checks.

**B♖c7:** White to move wins by 1 ♖d4! as before, but now Black to play draws only by 1...♖f7+! 2 ♖f4 ♔g6!. Note that 1...♖d7? loses after 2 ♖g1 ♖c7 (after 2...♖d4 3 ♖c1! ♔g6 4 ♔e3! ♖h4 5 ♔d3! ♔f7 6 ♖e1! White sets up a winning two-file cut-off) 3 ♖c1! ♔g6 4 ♔e4! ♔f6 5 ♔d5! ♔e7 6 ♖h1 ♖d7+ 7 ♔c6! ♖d6+ (if Black could check on c8 he would draw, but his rook is badly placed on the second rank) 8 ♔c5 ♖d2 9 ♖h7+ ♔d8 10 ♔c6 and wins as in line 1 on the previous page.

**B♖c6:** This is the same as with the rook on c7.

**B♖c5:** Now everything is different. White to play can try:

1) **1 ♖d4?** ♔g6 2 ♔e4 ♔f6 3 ♔d3 (♔d5 is impossible) ♔e6! (very accurate defence; 3...♔e5? 4 ♖d8! ♔e6 5 ♔c3! ♔e7 6 ♖d4 ♖c8 7 ♔b4! and 3...♔e7? 4 ♔c3! both win as in diagram 377) 4 ♔c3 (4 ♖d8 ♔e7) ♖c8! drawing as in line 1 of diagram 377.

2) **1 ♖e4!** ♔g5 2 ♔e3 ♔f5 3 ♔d3! and Black has no check on the d-file, so White can set up a decisive two-file cut-off. Black to play can draw by 1...♖f5+! 2 ♖f4 ♔g5.

There are four positions of reciprocal zugzwang in the ending of ♖+♙c4 v ♖. One may be found just before diagram 389 and the others are diagrams 375, 389 and 390.

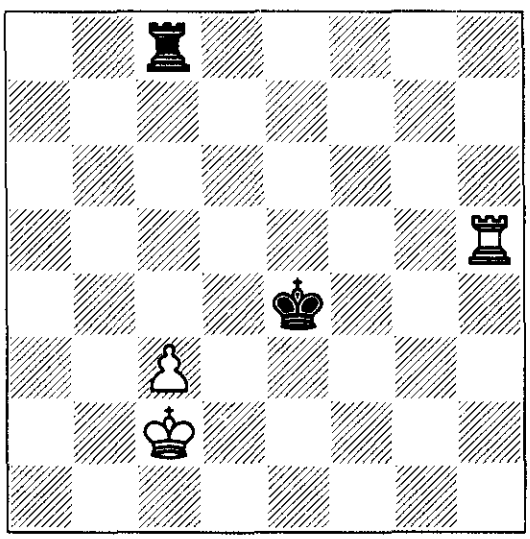
**Practical tips:** The comments at the start of section 3.4.1 are important, and over-the-board players should be aware of diagrams 376-8.

## 3.5: Pawn on the third rank

3.5.1: Black's king is cut off along a rank 231
3.5.2: Black's king is cut off along a file 231
3.5.3: As 3.5.2, but with White's king cut off along a rank 235
3.5.4: Other situations 240

### 3.5.1: Black's king is cut off along a rank

The results echo those in section 2.5.1. With a rook on the fifth rank, shifting diagram 271 gives the following:



392 +/=

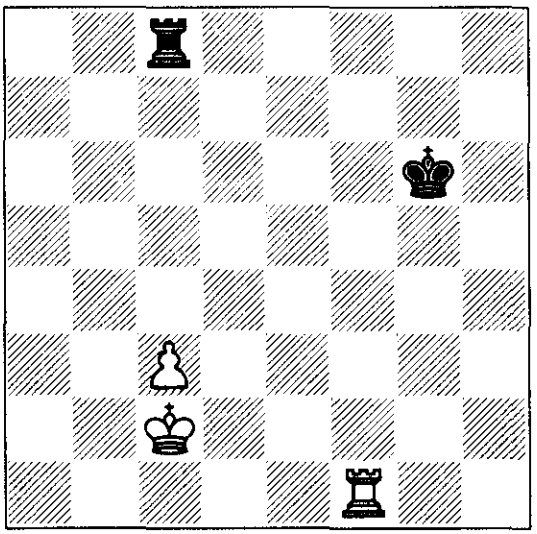
**(392):** The game is decided by occupation of the b-file, so White to play wins by 1 ♖b5, while Black to play draws by 1...♖b8!. The analysis is identical to that of diagram 271.

White always wins when his rook is on the fourth rank. Diagram 272 shifted to the right gives W♔c2, ♖h4, ♙c3 v B♔e3, ♖c8. This is winning whoever moves first. Shifting diagrams 273 and 274 give W♔d6, ♖c5, ♙c3 v B♔f6, ♖c8 and W♔d6, ♖c5, ♙c3 v B♔f4, ♖c8; these are still won with Black to move, with identical analysis. The important reciprocal zugzwang of diagram 276 may be shifted to W♔c4, ♖c6, ♙c3 v B♔e5, ♖b8. It remains reciprocal zugzwang. Likewise shifting diagram 277 to give W♔c4, ♖c7, ♙c3 v B♔e4, ♖b8 makes little difference; it remains +/= with similar analysis.

### 3.5.2: Black's king is cut off along a file

A cut-off distance of three files guarantees a win, just as in the case of the

b-pawn, but the winning process is significantly easier because White can use the a-file.



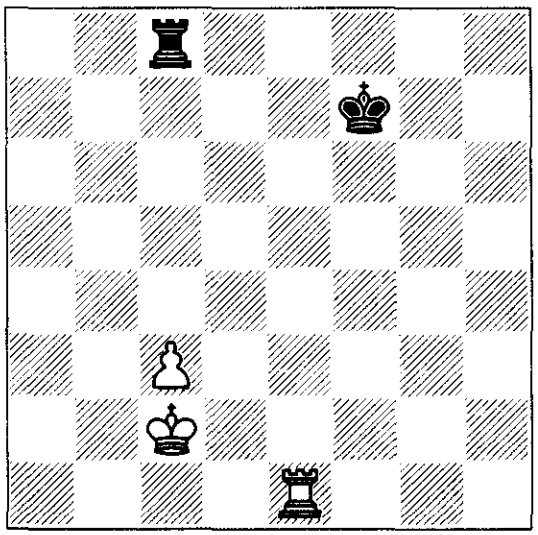
393 +/–

**(393):** The exact position of the black king makes no difference to the winning process, so we take White to move. 1 ♔b3 ♖b8+ 2 ♔a4 ♖a8+ 3 ♔b4 ♖b8+ 4 ♔a5 ♖c8 (4...♖a8+ 5 ♔b6 ♖b8+ 6 ♔c7 wins after 6...♖b5 7 ♔c6 or 6...♖b2 7 ♖c1 followed by c4) 5 ♖c1 ♔f6 6 c4 ♔e6 7 ♔b6! and wins as in diagram 376.

White can sometimes win with a two-file cut-off, but only if Black's king is badly placed.

**(394):** This position is a draw if it is shifted left, but here White to play can win. 1 ♖e3! ♔f6 (Black may as well improve his king position, because White's king will advance next move in any case) 2 ♔b3! ♖b8+ 3 ♔a4 (the a-file is necessary because 3 ♔c4? draws after 3...♔f5!) ♖a8+ 4 ♔b5 ♖b8+ 5 ♔c5 ♖c8+ 6 ♔d6 and now:

1) **6...♔f7** 7 ♖e7+ ♔f6 8 ♖c7 ♖d8+ 9 ♔c6 ♔e6 10 c4 and wins.



394 +/=

*Original*

2) **6...♔f5** 7 ♖e5+! ♔f6 8 ♖c5! ♖d8+ 9 ♔c7! ♖d1 10 c4 ♖d4 11 ♖c6+ ♔e5 12 ♔b6 ♖h4 13 ♖c7 ♖h6+ 14 ♔b5, followed by c5.

3) **6...♔g6** 7 ♖e6+ transposes to variation 1 or 2, according to Black's reply.

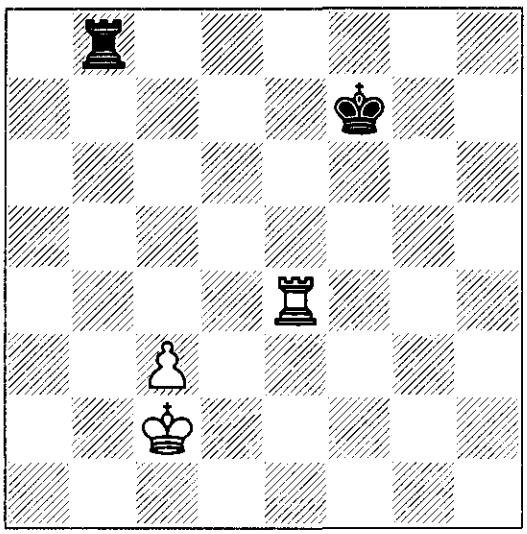
4) **6...♖d8+** 7 ♔c7 ♖d5 8 ♔b6 ♖d6+ 9 ♔c5, followed by c4.

It might seem that Black's problems result from having his king on f6 when White's king arrives on d6, but this is not so. If Black's king is on f7 then White can win more simply because 5 ♔b5 ♖b8+ 6 ♔c6 ♖c8+ 7 ♔d7 ♖c4 8 ♔d6 ♖c8 (or else ♔d5 and c4) 9 ♖e7+ would lead directly into line 1 above.

However, it is true that if Black's king is further up the board then he can draw, for example take the diagram with Black to move: 1...♔f6! (we shall see in diagram 395 that 1...♖b8? loses) 2 ♖e3 ♔f5! 3 ♔b3 ♖b8+ 4 ♔a4 ♖a8+ 5 ♔b5 ♖b8+! 6 ♔c6 ♔f4 7 ♖h3 ♔e4! 8 c4 (8 ♖h4+ ♔d3! 9 c4 ♖c8+! 10

♔b5 ♖b8+! and there is no shelter) ♖c8+! 9 ♔b5 ♖b8+! 10 ♔c5 ♖c8+! 11 ♔b4 ♖b8+! 12 ♔c3 ♔e5! 13 ♖h6 ♖b7 and as we remarked above, this position is decided by occupation of the b-file. Here Black is in control, so the result is a draw.

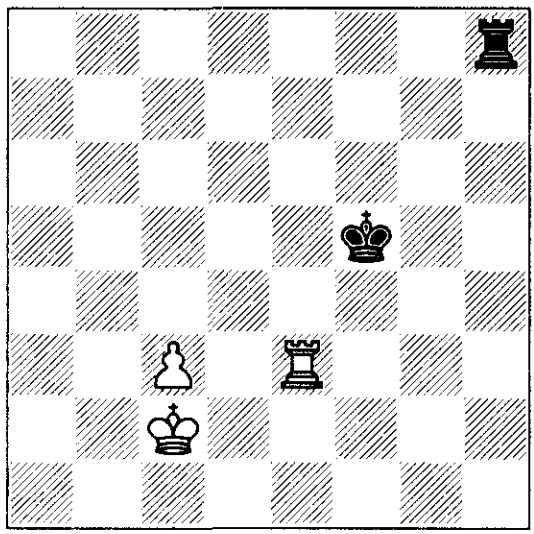
Surprisingly, if Black's rook is on b8 the situation is rather different. The reason is that White's king has more trouble coming out, so in some cases White can only win by subtle play.



395 +/–

*Original*

(**395**): The position is harder to win if White is to play. The most obvious ideas lead nowhere, for example 1 c4? ♖e8! draws immediately and 1 ♔d3 ♖d8+ 2 ♔c4? ♔f6! 3 ♖e3 ♔f5! draws as in the previous diagram. There are a number of ways to win, but the simplest is 1 ♖e3 ♔f8 (1...♔f6 2 c4! wins because Black cannot play ...♖e8, and 1...♖c8 2 ♔b3 wins as in the previous diagram) 2 ♔d3 ♖d8+ 3 ♔c4 ♖c8+ (3...♔f7 4 ♔b5 as in the last diagram) 4 ♔d5 ♖d8+ 5 ♔c6 ♖c8+ 6 ♔d6 ♔g8 (forced, because 6...♔f7 7 ♖e7+ is line 1 of the previous diagram) 7 ♖h3 (quickest, although with a three-file cut-off White wins in any case) ♔g7 (7...♔f7 8 ♖h7+ and 9 ♖c7) 8 ♖f3 ♔g6 (after 8...♔g8 9 ♔d5 White returns to c2, then ♖f4 and c4 wins because Black's king is too far from g5) 9 ♖e3 and Black cannot avoid rook checks leading to either ♖c5 or ♖c7, winning as in lines 1 and 2 of diagram 394.



396 =/=

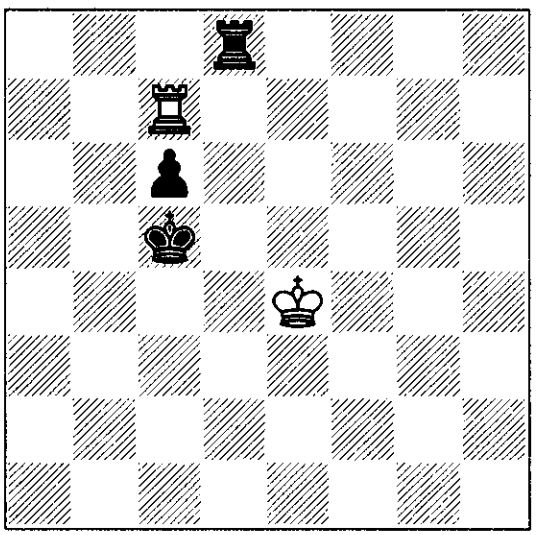
*Chéron, 1944*

(**396**): If Black's king is on f5, then White has no winning chances when his king is behind the pawn. We take White to play: 1 ♔b3 (after 1 c4 ♔f4! Black brings his king to the e-file or plays ...♖h3, with a draw in either case) ♖b8+! (1...♔f4? 2 ♖e6! ♖b8+ 3 ♔c4! ♔f5 4 ♖h6 ♔e4 5 ♖h5! followed by ♖b5 wins) 2 ♔a4 ♖c8 3 ♔b4 (3 ♔b5 ♔f4) ♖b8+! 4 ♔c5 ♖c8+! 5 ♔b6 (5 ♔d6 ♔f4 6 ♖h3 ♔e4) ♔f4 6 ♖h3 ♔e4 7 ♔b7 ♖c4 with an easy draw. Black to play can either wait by

1...♖g8 or play 1...♖c8 with a draw as in diagram 394.

It is worth mentioning one deceptive position. If we move Black's rook to c8 in diagram 396 then Black to play can draw, but he must not play the obvious 1...♔f6? when 2 ♔b3! wins as in diagram 394. Instead 1...♔f4 draws, as does 1...♖h8 leading to diagram 396.

Even a one-file cut-off can win, but it requires a very favourable initial position. We take a practical example.



397 –/

**Kruszynski – Wiemer**
*West Germany, 1984*

**(397):** White's rook is miserably placed and at some stage he will have to bring it back to the first rank. *ECE* erroneously considers this position to be a draw with White to play. The analysis runs:

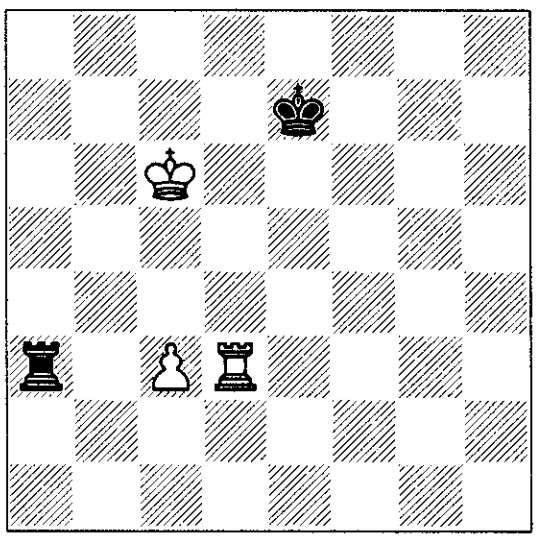
1) **1 ♔e3** (the game continuation) ♔b5 2 ♖b7+ ♔c4! 3 ♖b1 (although the rook has been activated, Black can exploit the unfortunate White king position) ♖d3+! (3...c5? 4 ♖c1+! draws) 4 ♔e2 c5! 5 ♖c1+ ♖c3! 6 ♖h1 ♔b3 7 ♔d2 ♖c2+! 8 ♔d1 c4 9 ♖h8 ♖g2 winning as in diagram 356.

2) **1 ♖a7** (*ECE*'s recommendation) and now:

2a) **1...♔c4?** 2 ♖a4+! (not 2 ♖a1? ♖e8+! 3 ♔f3 c5 and wins) ♔b3 (or 2...♔b5 3 ♖a1!) 3 ♖a5! ♔b4 4 ♖a1! c5 5 ♖b1+! ♔a4 6 ♖c1! (6 ♖a1+? ♔b3! wins) ♔b5 7 ♖b1+! ♔c6 8 ♖c1 draws.

2b) **1...♖d1!** (preventing the rook occupying the important first rank; White's king is too far up the board to drive the rook away from d1 in time) 2 ♔e3 (2 ♖a2 ♔b4! 3 ♖b2+ ♔c3! followed by ...c5) ♔c4 3 ♔e2 ♖d5 4 ♖a1 c5 5 ♖c1+ ♔b3 6 ♖b1+ ♔c2 7 ♖b5 ♖d2+, followed by ...c4 winning.

The following position is interesting.



398 +/–

*Original*

**(398):** White to play can only win by transferring the move to Black. He continues 1 ♔c7! and now:

1) **1...♔e6** (1...♔f6 2 ♖e3 is the same because Black has nothing better

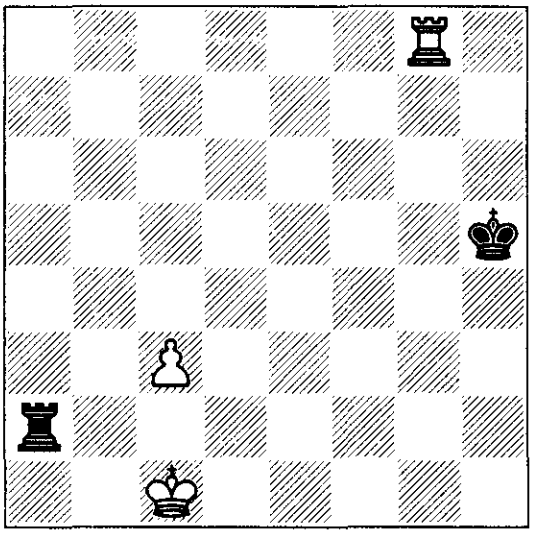
than 2...♔f5) 2 ♖e3+! ♔f5 (the tactical point is 2...♔d5 3 c4+!) 3 ♔c6 ♔f4 4 ♖h3! (4 ♖d3? ♔e4! 5 ♖h3 ♖a8 6 c4 ♖c8+! 7 ♔b5 ♖b8+! draws as in diagram 394 with Black to play) ♔g4 5 ♖d3! ♔f4 6 ♔c5 ♔e4 7 ♖d4+! (7 ♖h3? ♖a8! draws) ♔e5 (7...♔e3 8 ♔b4 ♖a8 9 ♖d5 forces c4) 8 ♖d5+! ♔e6 9 c4! ♖a5+ 10 ♔c6! ♖a6+ 11 ♔b5 ♖a8 12 ♖d4 winning after 12...♔e5 13 ♖h4 or 12...♖b8+ 13 ♔c6.

2) **1...♖a7+** 2 ♔b6! ♖a3 3 ♔c6! ♖b3 (there is nothing else as 3...♔e6 4 ♖e3+ ♔f5 5 ♔c5 is an improved version of line 1) 4 ♖d7+ ♔e6 5 c4 and with the rook on b3 Black lacks the check on a6 which prevented this line when White was to play.

### 3.5.3: Black's king is cut off along a file and White's king is cut off along a rank

This is the most complicated section in the current chapter. White only has chances to win if Black's king is cut off on the h-file, and then the result depends on the exact position of the pieces, particularly the location of Black's king. The possible positions may be divided into three main classes. In the first class Black's king is on h6, h7 or h8. In the second class the king stands on h4 or h5 and in the third class it stands on h3. Within a class the exact position of Black's king is relatively unimportant, i.e. if White is winning in a position with Black's king on h7 then he will also win if Black's king is moved to h6 or h8. Taking the class 1 positions first, the table on the following page describes the results.

There are a number of mysteries in this table. First of all we look at a fundamental position which influences all the subsequent analysis.



399 =/=

*Chéron, 1967*

**(399):** Chéron did not discover this important drawing position in his 1944 analysis and so some of his conclusions were incorrect. By 1967 he had discovered diagram 399, but he did not fully incorporate the new discovery into his earlier analysis, so some inaccuracies remain. White to play may try:

W1) **1 ♖d8** ♔g4! (after 1...♔g5? 2 ♖d2! ♖a7 3 ♖f2! White really does win; the difference becomes clear below) 2 ♖d2 ♖a8 (2...♖a1+? 3 ♔b2! ♖a8 4 c4 wins) 3 ♖f2 ♔g3! (Black must disturb the rook) 4 ♖b2 (if White moves his rook along the file then Black returns to a2) ♔f4 (time for the king to return; 4...♔f3? loses to 5 ♔c2! ♔e4 6 ♖b5! and White controls

**In all cases W♖g1, ♙c3 and B♔h7: W=White to play B=Black to play**

| | W♔d1 | W♔c1 | W♔b1 |
|---|---|---|---|
| **B♖h2** | W: Win (1 ♖e1!)<br>B: Draw (1...♖a2!) | W: Draw<br>B: Draw (1...♔h6/h8) | W: Draw<br>B: Draw<br>(1...♔h6/h8/♖d2/e2) |
| **B♖f2** | W: Win (1 ♖e1!)<br>B: Draw (1...♖a2!) | W: Win (1 ♖d1!)<br>B: Draw (1...♖h2!) | W: Win: (1 ♖c1!)<br>B: Draw<br>(1...♖d2/e2/h2) |
| **B♖e2** | B: Draw (1...♖a2!) | W: Win (1 ♖d1!)<br>B: Draw (1...♖h2!) | W: Draw<br>B: Draw<br>(1...♔h6/h8/♖d2/h2) |
| **B♖d2** | * | B: Draw (1...♖h2!) | W: Draw<br>B: Draw<br>(1...♔h6/h8/♖e2/h2) |
| **B♖b2** | W: Win (1 ♖e1!) | B: Draw (1...♖h2!) | * |
| **B♖a2** | W: Draw | W: Win (1 ♖d1!) | B: Draw<br>(1...♖d2/e2/h2) |

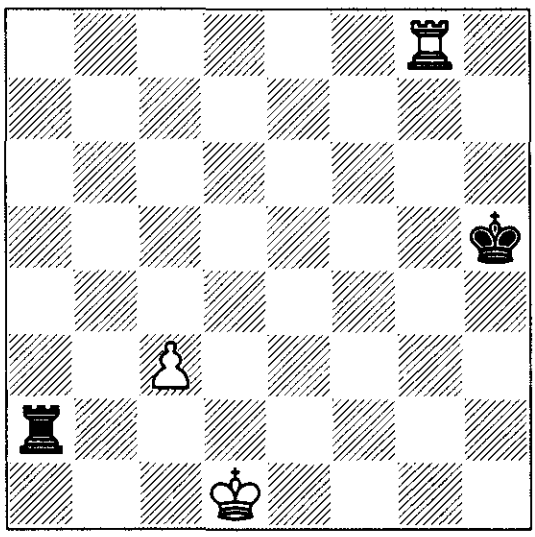
the b-file, winning as in diagram 392) draws after 5 ♖b5 ♖a2! or 5 ♔c2 ♔e5.

W2) **1 ♖b8** ♔g5 2 ♖b2 ♖a1+ 3 ♔c2 ♔f5 draws comfortably.

W3) **1 ♔d1** *(D)* and now:

W3a) **1...♖b2?** (1...♖f2? 2 ♖e8! is similar) 2 ♖e8! ♔g4 3 ♖e2! ♖b8 4 ♔c2! (now we see why Black's rook has to be on the a-file; without the check on a2, Black cannot stop White establishing a decisive cut-off) ♔f3 (4...♖a8 5 ♖e5 ♔f4 6 ♖b5 wins) 5 ♖e5 ♔f4 6 ♖d5! ♔e4 7 c4! and wins.

W3b) **1...♔h6** (1...♔h4 is also a draw; Black's rook is already on the best square and should not be moved)



399a =/=

2 ♖e8 ♔g6 3 ♖e2 ♖a8 4 ♔c1 ♔f6 (not 4...♔f7? 5 ♔b2! and wins – see diagram

394) 5 ♔b2 ♖b8+ and draws as in diagram 394 with Black to move.

W4) **1 ♔b1** ♖e2 2 ♖b8 ♔g6 3 ♖b2 ♖e1+ 4 ♔c2 ♔f6 draws easily.

With Black to play the position is still drawn, but there is a unique drawing move:

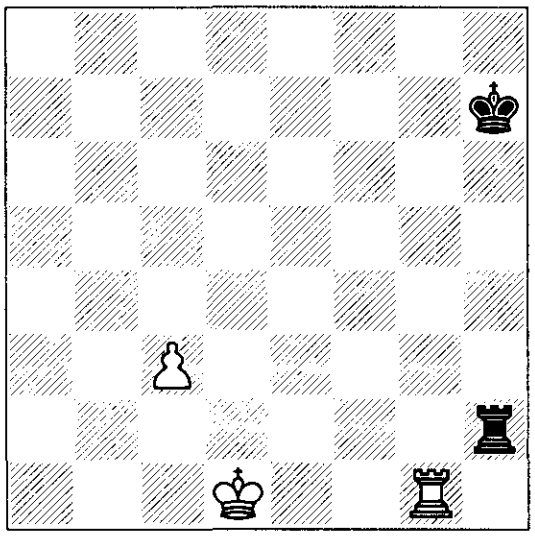
B1) **1...♔h6?** 2 ♖d8 ♔g5 3 ♖d2! wins as in line W1 above, note to Black's first move.

B2) **1...♖e2?** 2 ♖d8! ♔g4 (2...♔g5 3 ♖d2! ♖e8 4 ♖f2! gives a winning cut-off) 3 ♖d2! ♖e8 4 ♔c2 (threat ♖f2) ♔f4 (4...♔f5 5 ♖f2+!) 5 ♖d5 ♔e4 (or 5...♖c8 6 ♔d3 and 7 c4) 6 c4 and wins.

B3) **1...♔h4!** 2 ♔d1 (2 ♖d8 ♔g4! draws as in line W1, but not 2...♔g3? 3 ♖d2! ♖a8 4 ♔b2 ♔f4 5 ♖d5! and wins; moreover 2 c4 ♔h5 3 c5 ♖a5! 4 ♖c8 ♔g6 5 c6 ♔f7 6 c7 ♖c5+! draws) ♔h5! (Black keeps his rook on the best square a2; 2...♔h3? loses to 3 c4! and now 3...♖a4 4 c5! ♖c4 5 ♖g5! ♔h4 6 ♖d5! or 3...♔h4 4 c5! ♖a5 5 c6 ♖c5 6 ♖c8! and Black's king is too far up the board) and White is going nowhere.

Readers who have played over the above analysis will have no trouble understanding the following position.

**(400):** White to play wins by 1 ♖e1! (after 1 ♔c1? Black waits by 1...♔h6, while after 1 ♖g4? or 1 ♖g5? Black improves his rook position by 1...♖a2!) ♔g6 2 ♖e2! ♖h8 3 ♖f2! (threat ♔c2 with a decisive cut-off) ♖a8 (when Black's rook is not on the a-file he has to lose this vital tempo) 4 ♔c1! (the rook must stay on f2, or else ...♖a2, so this move is forced, but it is also decisive) ♔g5 5 ♔b2 and White has created a winning three-file cut-off.



400 +/=

*Chéron, 1944*

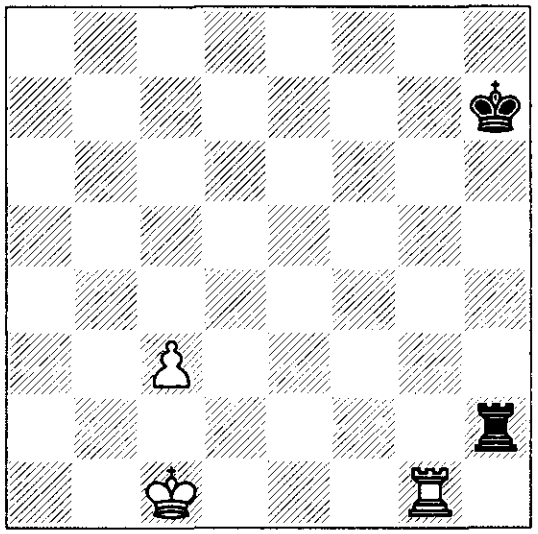
Black to play draws by 1...♖a2! (other moves on the second rank do not prevent ♖e1; even 1...♖b2? loses to 2 ♖e1! ♔g6 3 ♖e2! ♖b8 4 ♖f2!) 2 ♖g3 ♔h6 3 ♔c1 (3 ♖e3 ♔g6 4 ♖e2 ♖a8 draws after 5 ♔c2 ♔f6 or 5 ♖f2 ♖a1+ 6 ♔d2 ♖a2+! exchanging rooks) and Black has two drawing moves:

1) **3...♔h5** 4 ♖d3 (4 ♖g8 ♔h4! is diagram 399) ♔g4! 5 ♖d2 draws as in line W1 of diagram 399.

2) **3...♖h2** 4 ♖g8 (4 ♖d3 ♔g6 5 ♖d2 ♖h1+ 6 ♔c2 ♔f6 7 ♖e2 ♖h8! and Black is just in time with his rook because 8 c4 fails to 8...♖h3!) transposes to diagram 401 below.

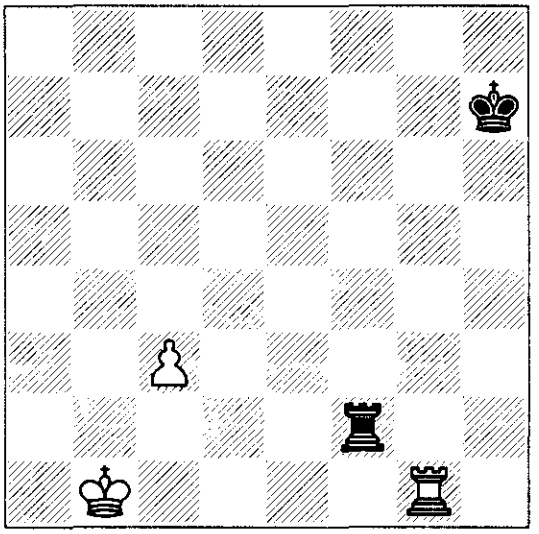
**(401):** Suppose White is to play. After 1 ♖g4 (1 ♔d1 ♖a2! is diagram 400) we have:

1) **1...♖f2?** 2 ♖d4! ♔g6 3 ♖d2! ♖f6 (the f-file is the worst place for Black's rook because after 3...♖f8 White plays 4 ♖g2+!) 4 ♔b2 ♔f7 5 ♖e2! ♖c6 6 ♔b3 ♖b6+ 7 ♔a4 ♖c6 8 ♔b4 ♖b6+ (Black's rook is too close to White's pawn) 9 ♔c5 and 10 c4.



401 =/=

*Chéron, 1944*



402 +/=

*Original*

2) **1...♖a2?** 2 ♖d4! ♔g6 3 ♖d2! ♖a8 4 ♖f2! with a decisive cut-off. This line wins for White because Black's king cannot dislodge White's rook from f2 quickly enough.

3) **1...♔h6** 2 ♖g8 (for 2 ♖d4 ♔g6 see the main line, while 2 ♔d1 ♖a2! is diagram 400 again) ♔h7! (moving the rook along the second rank loses as in lines 1 and 2) 3 ♖d8 ♔g6 4 ♖d2 ♖h1+ 5 ♔c2 ♔f6 6 ♖e2 ♖h8! 7 ♔b3 ♖b8+ drawing as in diagram 394 with Black to play.

The conclusion from the above diagrams is simple. When White's king is on c1 Black's rook should be on h2 and when it is on d1 Black's rook should be on a2. On no account should Black play his rook to f2.

**(402):** b1 is not the best square for White's king. As before Black is safe with his rook on h2, but now he is safe on d2 and e2 as well. Only B♖f2 loses with White to play: 1 ♖c1! (this is the only positive aspect to having the king on b1; 1 c4? ♖h2 draws because after 2 ♖c1 ♔g6 3 ♖c2 ♖h8 4 ♔b2 ♔f6 5 ♖e2 Black can reply 5...♖h3!) ♔g7 (after 1...♔g6 2 ♖c2 Black cannot move his rook to f7 or f8) 2 ♖c2! ♖f7 (once again the f-file proves unfortunate because 2...♖f8 fails to 3 ♖g2+!) 3 ♖e2 ♖c7 4 ♔c2 ♔f6 5 ♔b3! (if Black's rook were on c8 he would draw, but it is one square too close) ♖b7+ 6 ♔a4 ♖c7 7 ♖e3 ♖c8 (7...♔f5 8 ♔b5 ♔f4 9 ♖h3! ♔g4 10 ♖d3 forces c4) 8 ♔b5 winning as in diagram 394.

Black to play draws by any move along the second rank, for example 1...♖h2 (or 1...♖d2/e2) 2 ♖c1 ♔g6 3 ♖c2 ♖h1+ 4 ♔b2 ♔f6 5 ♖e2 ♖h8! drawing after 6 ♔b3 ♖b8+! (diagram 394) or 6 c4 ♖h3!.

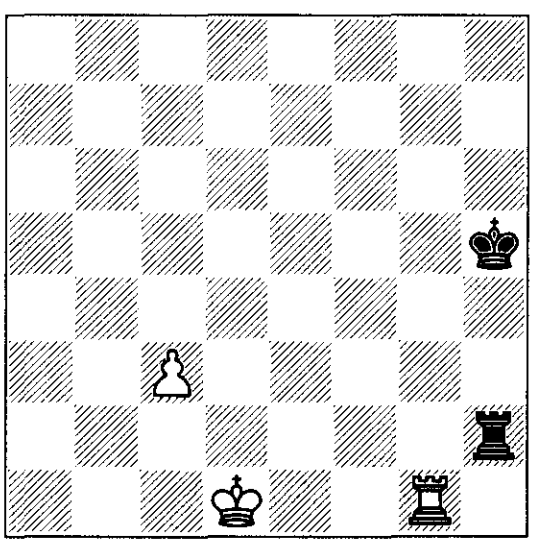
We now move on to the class 2 positions with Black's king on h5 (the results are almost identical if the king is on h4). This is more favourable for Black and some of the winning positions in the earlier table are now drawn. The results are given in the table on the following page.

**In all cases W♖g1, ♙c3 and B♔h5: W=White to play B=Black to play**

| | W♔d1 | W♔c1 | W♔b1 |
|---|---|---|---|
| **B♖h2** | W: Draw<br>B: Draw<br>(1...♖a2/♔h4) | W: Draw<br>B: Draw<br>(1...♔h6/h4/♖a2) | W: Draw<br>B: Draw<br>(1...♔h6/h4/♖d2/e2/f2) |
| **B♖f2** | W: Win: (1 ♖e1!)<br>B: Draw<br>(1...♖a2/h2) | W: Win: (1 ♖d1!)<br>B: Draw<br>(1...♖a2/h2) | W: Draw<br>B: Draw<br>(1...♖d2/e2/h2/♔h4) |
| **B♖e2** | B: Draw<br>(1...♖a2/h2) | W: Win: (1 ♖d1!)<br>B: Draw<br>(1...♖a2/h2) | W: Draw<br>B: Draw<br>(1...♔h6/h4/♖d2/f2/h2) |
| **B♖d2** | * | B: Draw<br>(1...♖a2/h2) | W: Draw<br>B: Draw<br>(1...♔h6/h4/♖e2/f2/h2) |
| **B♖b2** | W: Win: (1 ♖e1!) | B: Draw<br>(1...♖a2/h2) | * |
| **B♖a2** | W: Draw | W: Draw | B: Draw (1...♖d2/e2/f2/h2) |

Since much of the analysis duplicates that with the king on h7, we only point out the differences.

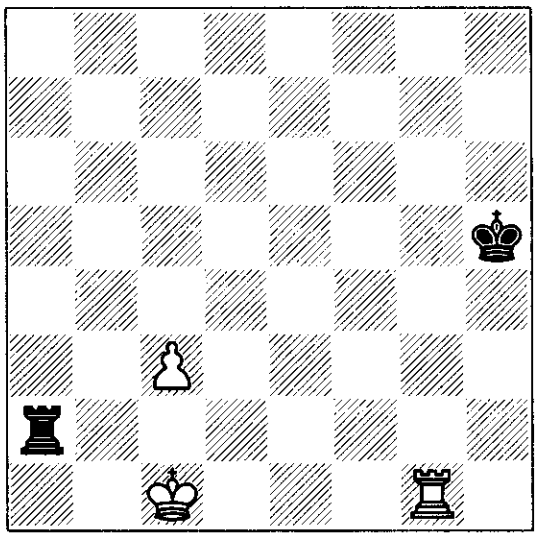
**(403):** This is now drawn. After 1 ♖e1 ♔g4! 2 ♖e2 ♖h8 3 ♖f2 (3 ♔c2 ♔f4 4 c4 ♖h3!) ♔g3 4 ♖d2 ♔f4 Black draws easily. But move Black's rook to f2 or b2 and White wins. With the rook on f2, 1 ♖e1! ♔g4 2 ♖e2! ♖f8 3 ♔c2 (threat ♖e5) ♖a8 (Black's king cannot move to f4 or f5) 4 ♖e5 ♔f4 5 ♖b5 controls the b-file and wins as in diagram 392. With the rook on b2 White wins by 1 ♖e1! ♔g4 2 ♖e2! ♖b8 3 ♔c2! ♔f4 (3...♖a8 4 ♖e5) 4 c4!



403 =/=

*Original*

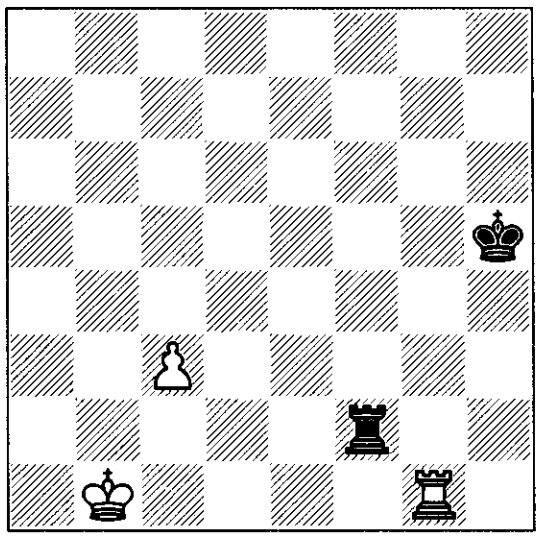
and Black's rook cannot return to the third rank.



404 =/

*Original*

**(404):** This was won with the king on h7, but now it is a draw after 1 ♖d1 ♔g4! 2 ♖d2 ♖a8 3 ♖f2 ♔g3! transposing to diagram 399. Apart from this exceptional position, the situation with the king on c1 is the same whether Black's king is on h7 or h5.



405 =/=

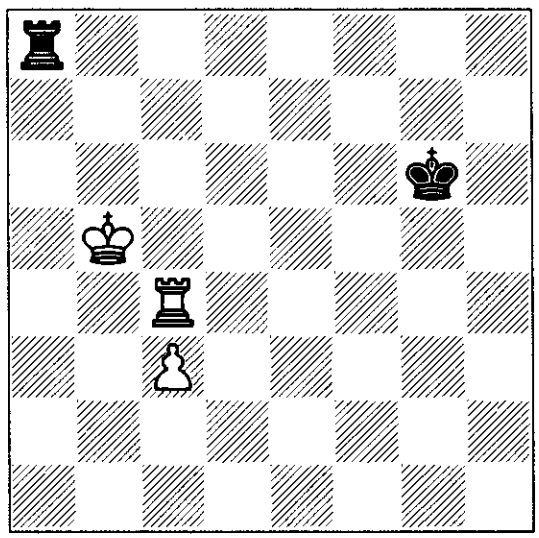
*Original*

**(405):** With the king on b1 there is also only one difference. When Black's king was on h7, White could only win against a B♖ on f2. Now even that possibility disappears since Black can draw by 1 ♖c1 ♔g4! (1...♔g5? 2 ♖c2! ♖f8 3 ♖g2+! wins) 2 ♖c2 ♖f8 3 ♖e2 (3 ♖g2+ ♔f3!) ♖c8 (3...♔f3? 4 ♖e5! ♔f4 5 ♖b5! and White wins because Black's king blocks the move ...♖f2) 4 ♔c2 ♔f5! drawing as in diagram 396.

The situation again changes slightly when Black's king is on h3, the main difference being that his rook is boxed in on h2 so White can win by playing 1 c4. We give the conclusions in the table on the next page, but we omit the analysis as it is similar to that above.

### 3.5.4: Other situations

We start with two practical examples.



406 /=

**Makarychev – Lerner**

*USSR Ch (Minsk), 1979*

**(406):** Contrary to *ECE*, this position is a draw. The game continued:

**In all cases W♖g1, ♙c3 and B♔h3: W=White to play B=Black to play**

| | W♔d1 | W♔c1 | W♔b1 |
|---|---|---|---|
| **B♖h2** | W: Win (1 c4/♖e1)<br>B: Draw<br>(1...♖a2/♔h4) | W: Draw<br>B: Draw<br>(1...♔h4/♖a2) | W: Win (1 c4!)<br>B: Draw<br>(1...♔h4/♖d2/e2/f2) |
| **B♖f2** | W: Win: (1 ♖e1/g8)<br>B: Draw (1...♖a2!) | W: Win: (1 ♖d1!)<br>B: Draw (1...♖a2/h2) | W: Draw<br>B: Draw<br>(1...♖d2/e2/♔h4) |
| **B♖e2** | B: Draw (1...♖a2!) | W: Win: (1 ♖d1!)<br>B: Draw (1...♖a2/h2) | W: Draw<br>B: Draw<br>(1...♔h4/♖d2/f2) |
| **B♖d2** | * | B: Draw (1...♖a2/h2) | W: Draw<br>B: Draw<br>(1...♔h4/♖e2/f2) |
| **B♖b2** | W: Win: (1 ♖e1/g8) | B: Draw (1...♖a2/h2) | * |
| **B♖a2** | W: Draw | W: Draw | B: Draw<br>(1...♖d2/e2/f2) |

**1 ... ♖b8+!**

Lerner finds the only drawing move. The alternatives all lose:

1) **1...♔f7?** 2 ♖e4 ♖b8+ 3 ♔a5 ♖a8+ 4 ♔b6 ♖c8 5 c4 winning.

2) **1...♔f6?** 2 ♖c7! (2 ♖e4? ♖b8+ 3 ♔a5 ♔f5! 4 ♖e3 ♖a8+ 5 ♔b6 ♖c8! and White cannot make progress) ♔e5 (2...♔e6 3 ♔c5 ♖a5+ 4 ♔b6 followed by c4 wins) 3 ♖c6 ♖a1 4 c4 followed by the gradual advance of the pawn.

3) **1...♔f5?** 2 ♖c6 wins as in line 2 above.

After the move played, 2 ♔a5 ♔f5 is a simple draw, so the king must move to the c-file. This blocks the rook and prevents it cutting off Black's king as in the above lines.

**2 ♔c6**

2 ♔c5 ♔f5! 3 ♖d4 ♖c8+! 4 ♔b4 ♖b8+ (or 4...♔e6) is also a draw.

**2 ... ♔f5!**

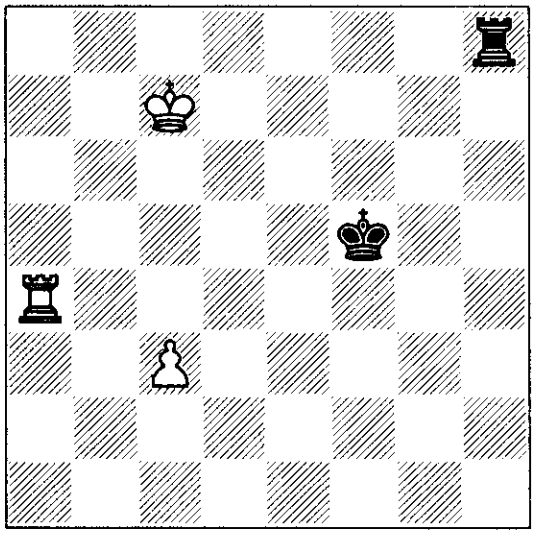
A second 'only move' by Black. After 2...♔f6? 3 ♔c7 ♖h8 4 ♖c5 Black's king is cut off, while 2...♖c8+? 3 ♔d5 ♖d8+ 4 ♔e6 only serves to improve the position of White's king.

**3 ♔c7 ♖h8!**

Excellent defence and a third 'only move'. 3...♖g8? (3...♖b3? 4 ♔d6! ♖a3 5 ♔d5! ♖a5+ 6 ♖c5! ♖a8 7 c4 ♖d8+ 8 ♔c6! ♔e6 9 ♔c7 also wins) loses as White's rook can take up an active position by 4 ♖h4!, e.g. 4...♖g7+ 5 ♔d6 ♖g6+ 6 ♔d5 ♔f6 7 ♖e4 or 4...♔e5 5 ♖h5+ followed by c4.

**4 ♖a4** *(D)*

This square is much less satisfactory, but 4 ♖d4 is met by 4...♔e5! 5 ♖d3 ♖h4, with a comfortable draw.

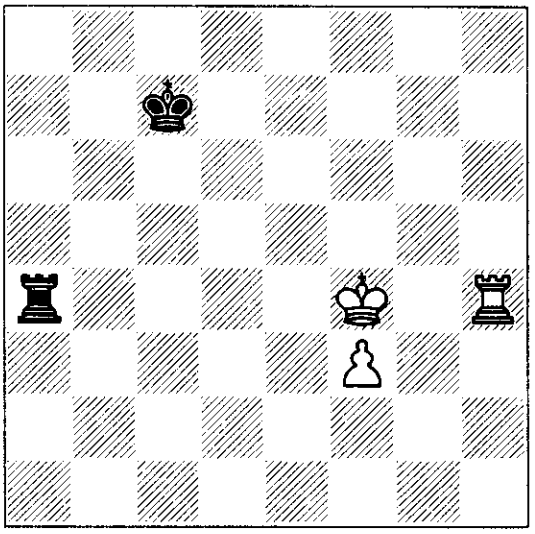


406a +/=

**4 ... ♔e5?**

A sad error. Black could have held the game by 4...♔e6! 5 c4 (5 ♖a5 ♖h4 6 ♖c5 ♖h7+ 7 ♔c6 ♖h8 draws) ♖h7+! (5...♖h4? 6 ♖a6+! and 7 c5 wins) 6 ♔c6 (now the king blocks White's rook check) ♖h4! and White cannot free himself without allowing Black's king in front of the pawn.

The game concluded **5 ♖a5+!** (now White wins) ♔e4 (5...♔e6 6 c4! is no better) **6 c4! ♖h7+ 7 ♔b6 ♖h6+ 8 ♔b5 ♖h8 9 ♖a6 ♔d4 10 ♖d6+ ♔e5 11 c5 ♖b8+ 12 ♖b6 1-0.**



407 +/

**Hodgson – Ravi**
*London Peace, 1987*

(**407**): Which way should the king go?

1) **1 ♔g3!** ♖a8 2 ♖d4! (the cut-off is only two files, but White wins because Black's king is on c7 and not c6) ♖g8+ 3 ♔h4 ♖h8+ 4 ♔g4 ♖g8+ 5 ♔h5 ♖h8+ 6 ♔g6 and Black cannot prevent f4.

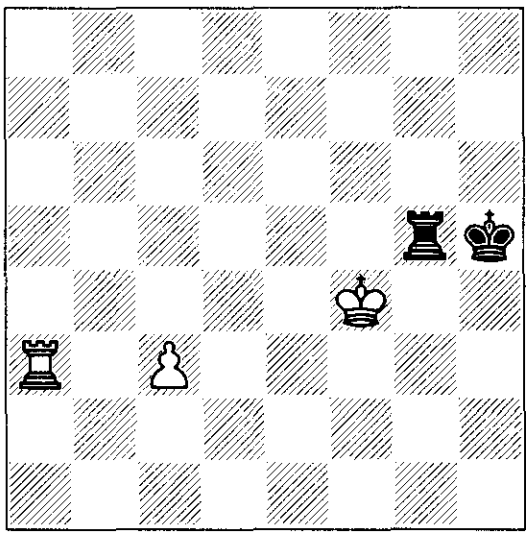
2) **1 ♔g5?** (the game continuation) and now:

2a) **1...♖a3!** 2 f4 ♔d7 (Black is saved by the poor position of White's rook) 3 ♔f6 (3 f5 ♔e7! 4 ♖h7+ ♔f8! 5 ♔g6 ♖g3+ 6 ♔f6 ♔g8! draws) ♖a6+! 4 ♔f7 ♖a4! (the same motif as in the previous diagram) and White cannot free himself.

2b) **1...♖a5+?** (as played by Ravi) 2 ♔f6 (now Black is losing once more)

♖a3 (or 2...♖a6+ 3 ♔e7 threatening ♖c4+, and after 3...♖c6 4 ♖e4 followed by f4 White wins easily) 3 ♖c4+ ♔d8 4 f4! ♔e8 (4...♖a6+ 5 ♔f7 ♖a7+ 6 ♔f8 ♖a5 7 ♖d4+ ♔c7 8 ♔e7 ♖c5 9 ♖d1 followed by either ♖f1 or ♖c1+ and wins) 5 f5 1-0 because the black king is trapped on the long side and White wins easily after 5...♖a6+ (or 5...♖a1 6 ♖c8+ ♔d7 7 ♖f8) 6 ♔g7! ♖a7+ 7 ♔g6 ♖a1 8 ♖c8+ ♔d7 9 ♖g8.

The rest of this section is devoted to the seven remaining reciprocal zugzwangs in the ending of ♖+♙c3 v ♖ (we have already mentioned one after diagram 392). These include some of the most astonishing endgame positions I have ever seen.



408 =/–

*Original*

**(408):** This belongs to the family which includes diagrams 227, 270 and 297, but having a c-pawn instead of a b-pawn introduces some new elements. Black to play:

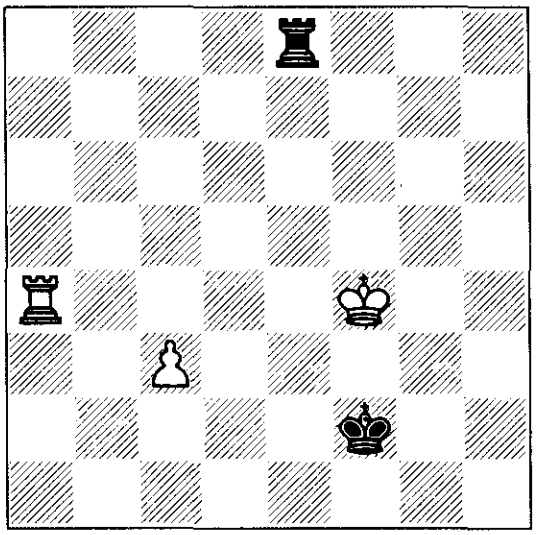
1) **1...♖g4+** 2 ♔e5! (2 ♔f5? ♖g3! loses a vital tempo) ♔g6 (after 2...♖g3 3 ♔d4! ♔g6 4 ♖a1 ♔f6 5 ♖e1! ♖g4+ Black's rook is badly placed and White wins by 6 ♔c5 ♖g5+ 7 ♔b4 followed by c4, with a two-file cut-off) 3 ♖a1 ♖c4 (3...♔f7 4 ♔d6 ♖c4 5 ♖a7+ ♔e8 6 ♖c7 ♖h4 7 ♖c8+ ♔f7 8 c4 wins) 4 ♖c1 ♔f7 5 ♔d5! ♖c8 6 ♔d6! ♖c4 7 ♖f1+ ♔e8 (7...♔g6 8 ♖f3 ♖c8 with a three-file cut-off) 8 ♖f3! ♖h4 9 ♖g3 ♖h6+ 10 ♔c7! ♖h7+ 11 ♔c8! ♖h4 12 ♖g7 ♖a4 13 ♖b7! ♖a8+ 14 ♔c7! ♖a5 (14...♖a4 15 ♖b4) 15 ♖b6 ♖a7+ 16 ♔c6 ♖a4 (16...♖a8 17 c4) 17 ♖b4 ♖a6+ (17...♖a8 18 ♔b7) 18 ♔b7 ♖d6 19 c4 ♖d4 20 ♔c6! ♔e7 21 ♖b7+! ♔d8 22 ♖b8+! ♔e7 23 c5! and the win is finally clear. A tough variation.

2) **1...♖c5** 2 ♔e4 (now White gains a tempo by attacking Black's rook) ♖c8 3 ♔d5 ♖d8+ 4 ♔c6 ♖c8+ 5 ♔d7 ♖c4 6 ♔d6 (threat ♔d5 and c4) ♖c8 7 ♖a5+ ♔g6 8 ♖c5! ♖d8+ 9 ♔c7 ♖d3 10 c4 ♖c3 11 ♔d6 ♔f6 12 ♖c7 and wins.

3) **1...♔g6** 2 ♖a6+! ♔h5 3 ♔e4 ♖g4+ 4 ♔d5 ♖g5+ 5 ♔d4 ♖g4+ 6 ♔c5 ♖g5+ 7 ♔b4 followed by c4, with a win for White.

4) **1...♔h4** 2 ♖a1 ♔h5 (2...♖g4+ 3 ♔e5 ♖c4 4 ♖c1 followed by ♔d5) 3 ♔e4 ♔g6 4 ♖f1 with a decisive cut-off.

White to play cannot win because after 1 ♖b3 (1 ♔e4 ♔g6! 2 c4 ♔f6 is similar) ♖a5! (Black prepares ...♔g6 while moving his rook far enough away that White cannot gain a tempo by attacking it with his king) 2 ♔e4 ♔g6! 3 c4 ♔f6 Black's king gets back in time.



409 =/–

*Original*

**(409):** With Black to play:

B1) **1...♖e7** 2 ♖a2+ ♔e1 3 c4! (threat c5) ♔d1 (3...♖c7 4 ♔e3! defends the pawn with gain of tempo) 4 c5! ♖c7 (4...♖e6 5 ♔f5 ♖c6 6 ♖a5! is similar) 5 ♖a5! ♔c2 6 ♔e5! ♔c3 7 ♔d6! gains a decisive tempo because Black's rook is on c7 and not c8.

B2) **1...♔f1** 2 ♔f3 ♖e1 3 c4 wins easily.

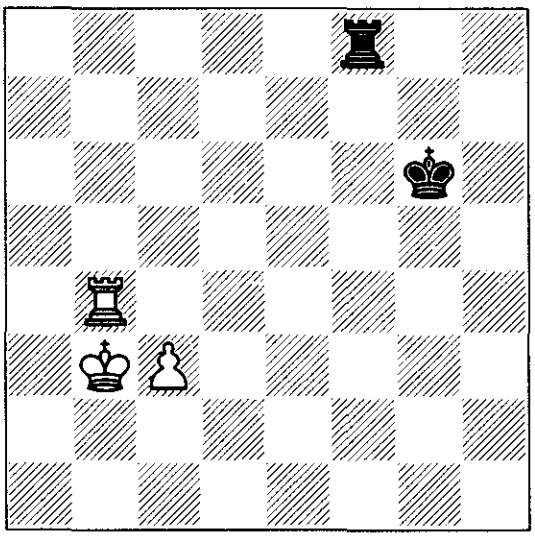
B3) **1...♖c8** 2 c4! ♔e2 3 ♔e4! ♔d2 4 ♔d5! (4 ♔d4? ♔c2! draws after 5 c5 ♔b3! 6 ♖a6 ♔b4 7 ♖b6+ ♔a5 and Black's king is safely on the short side of the pawn) ♖d8+ (4...♔c3 5 c5! and Black's king is cut off) 5 ♔c6 ♖c8+ (5...♖d4 6 ♖a2+) 6 ♔d6 and the pawn advances while Black's king is far away.

It is more surprising that White has no waiting move:

W1) **1 ♖b4** (1 c4 ♔e2 2 c5 ♔d3 is a comfortable draw) ♖c8 2 c4 ♔e2! 3 ♔e4 ♔d2! 4 ♔d4 (4 ♔d5 ♔c3 and Black gains a vital tempo) ♖d8+! followed by ...♔c3 draws.

W2) **1 ♖d4** ♖c8! 2 c4 ♖c5 3 ♔e4 ♔e2! draws.

W3) **1 ♖a2+** ♔e1! 2 c4 ♔d1! 3 c5 ♖c8! 4 ♖a5 ♔c2 5 ♔e5 ♔c3 6 ♔d6 ♔b4! 7 ♖a1 ♔b5 8 ♖b1+ ♔a6! 9 c6 ♖h8 and Black is in time with his sideways checks.



410 =/–

*Original*

**(410):** It is very hard to believe that this position is reciprocal zugzwang, but it gradually becomes clear that Black to move is in trouble. If the rook leaves the f-file White plays ♖f4 with a decisive three-file cut-off. Black cannot play 1...♔f6/f7 because of 2 ♖f4+, nor is 1...♔g7 possible because of 2 ♖g4+. This only leaves 1...♔f5 and a rook move on the f-file:

B1) **1...♔f5** 2 ♖b6! ♔e5 3 ♔b4 followed by c4 and Black's king is fatally cut off.

B2) **1...♖f7** 2 ♖d4 ♔f5 (2...♖b7+ 3 ♔a4 ♖a7+ 4 ♔b5 doesn't help) 3 c4! ♔e5 (3...♔e6 4 ♔b4 ♖b7+ 5 ♔a5 wins) 4 ♖d1 and Black's rook is too close because if he starts checking then

the king comes to c6, while 4...♖f8 loses to 5 c5!.

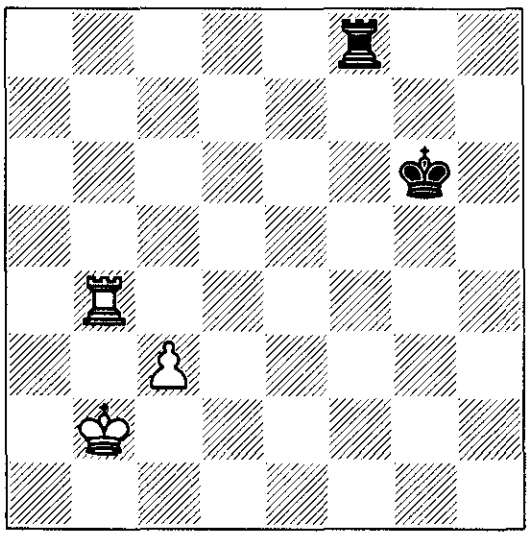
B3) **1...♖f6** 2 ♖d4 ♔f5 3 ♖d8 (not 3 c4? ♔e5! when 4 ♖d1 ♖d6! and 4 ♖d5+ ♔e6! 5 ♖d1 ♖f8! 6 c5 ♔e7 followed by ...♖d8 both lead to a draw) ♔e6 (3...♖b6+ 4 ♔a4 ♖c6 5 ♔b4 ♔e6 6 c4! ♔e7 7 ♖d4 ♖c8 8 ♔b5 wins) 4 ♔b4 ♔e7 5 ♖d4 ♖f8 6 c4 ♖b8+ 7 ♔a5 ♖a8+ 8 ♔b6 wins.

Now suppose that White is to play. Moving the rook up the b-file allows ...♔f6 (or 1 ♖b6+ ♔f7!), so White may try:

W1) **1 ♖e4** ♔f5 2 ♖e3 ♖b8+! with a draw by diagram 394.

W2) **1 c4** ♔f6 2 c5 ♔e6! (but not 2...♔e7? 3 ♖b7+! ♔e6 4 ♔c4, nor 2...♔e5? 3 ♔c4 ♔e6 4 ♖b7!) 3 ♖d4 (3 ♔c4 ♔d7) ♔e7! 4 ♔c4 ♖d8! and draws.

W3) **1 ♔b2** *(D)* (1 ♔a4 ♖c8 followed by ...♔f6, or 1 ♔c4 ♔f6) and now:

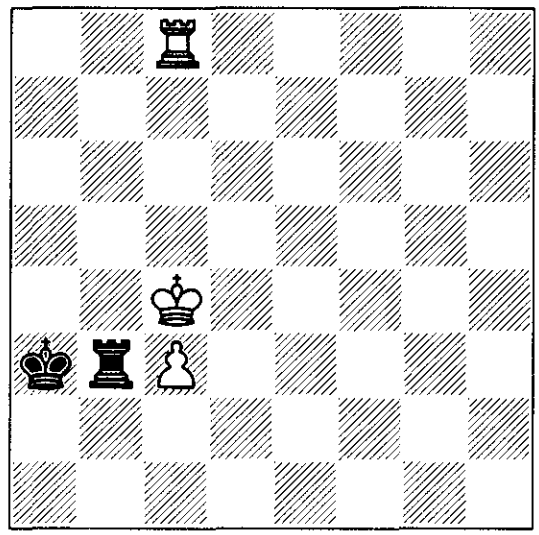


410a +/=

W3a) **1...♖f7?** 2 ♖b6+! ♔g7 3 ♔b3 ♖f8 4 ♖e6 ♖b8+ 5 ♔a4 ♖c8 6 ♔b4 ♖b8+ 7 ♔c5 ♔f7 8 ♖e4 and c4 will follow.

W3b) **1...♖f2+?** 2 ♔a3! ♖f8 (Black also loses after 2...♔f6 3 ♖e4! and 2...♔f5 3 ♖b6!) 3 ♔b3! transferring the move to Black.

W3c) **1...♔f5!** (surprisingly, this is the only move to hold the game) 2 ♖b6 ♔e5 3 ♔b3 ♔d5 4 ♔b4 ♖f4+ 5 ♔b5 ♖c4! draws.



411 =/–

*Original*

**(411):** This position is less paradoxical as Black's pieces are already tangled up. His only drawing chance is to bring his king to the short side of the pawn. With Black to play:

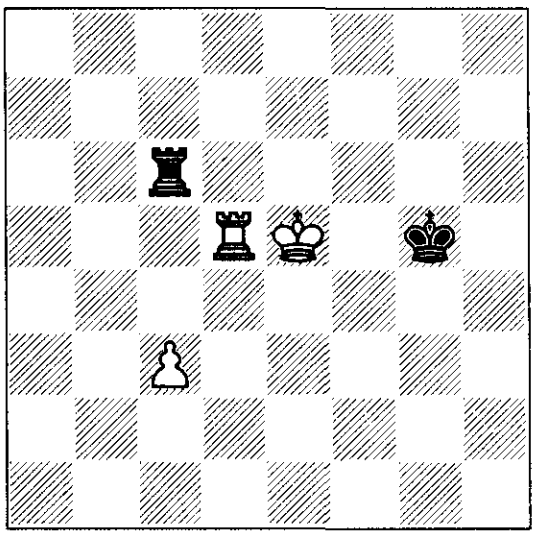
B1) **1...♔b2** 2 ♔d4! ♖b7 (2...♔c2 3 c4! ♖d3+ 4 ♔c5! ♔c3 5 ♔b5 and the pawn advances while Black's king is shut out) 3 c4! ♔b3 (3...♖h7 4 ♔c5 ♔b3 5 ♔b6 is a typical winning idea; it is not enough to advance the pawn, White must also stop Black's king returning down the a-file) 4 ♔c5! ♔a4 5 ♖a8+! ♔b3 6 ♔c6! ♖h7 7 c5! ♔b4 8 ♔b6 wins.

B2) **1...♖b7** 2 ♔c5! ♖a7 (trying to safeguard the a-file for Black's king; 2...♔a4 3 c4! and 2...♖h7 3 c4! ♔b3 4 ♔b6 are hopeless) 3 ♔b6 ♖a4 4 c4! ♖b4+ (4...♔b4 5 c5! ♖a5 6 c6! wins) 5 ♔c5! ♔a4 6 ♖h8 ♔b3 (6...♖b7 7 ♖a8+ is line 1) 7 ♖h3+! ♔a4 8 ♖h1! ♖b2 9 ♔c6 ♖g2 10 c5! ♖g6+ (10...♔a5 11 ♖a1+! ♔b4 12 ♔b6) 11 ♔b7! ♖g7+ (11...♔b5 12 c6!) 12 ♔b6! and wins.

With White to play:

W1) **1 ♔d4** (1 ♔d5 ♖b5+! 2 ♔d6 ♖h5 3 c4 ♔b4 is even easier) ♖b5! (1...♖b7? 2 ♔c5! is line B2) 2 c4 ♖h5 3 c5 ♔a4! (3...♔b4? 4 ♖b8+! ♔a5 5 c6! ♖h4+ 6 ♔c5! wins as in diagram 364, line 2) 4 ♖b8 (4 c6 ♔b5!) ♖h4+ drawing as in diagram 364, line 1.

W2) **1 ♖c7** (1 ♖h8 ♖b7 threatening 2...♖c7+ is very awkward for White) ♖b8 2 ♔c5 ♔b3 3 c4 ♔c3 is a clear draw.



412 =/–

*Original*

(**412**): Some easy analysis for a change. With Black to play the variations are:

1) **1...♖c4** 2 ♔d6+! ♔f6 3 ♖c5! ♖e4 4 c4 ♖d4+ 5 ♔c7 ♔e6 6 ♔b7 ♔d6 7 ♖c8 and the white pawn moves forward.

2) **1...♔g4** 2 ♔d4 cutting off the black king with an easy win.

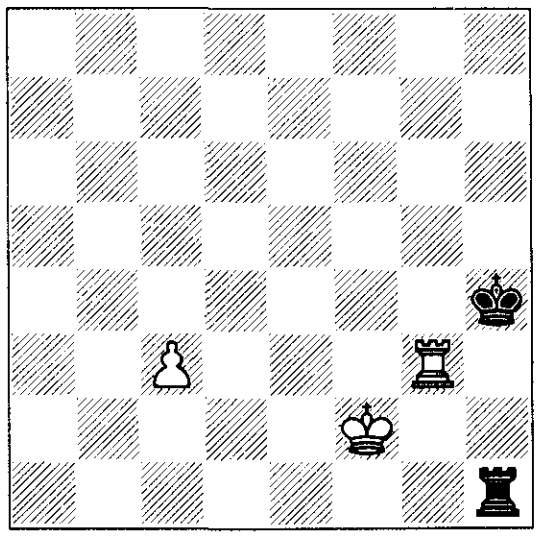
3) **1...♖c8** 2 ♔d4+ ♔f6 3 c4! ♔e7 (3...♔e6 4 c5! ♖a8 5 ♖d6+! ♔e7 6 ♔d5 wins) 4 c5! ♖d8 5 c6! and White wins.

With White to play the main lines are:

1) **1 ♔d4+** ♔f6! 2 c4 ♔e6! 3 c5 ♖a6! followed by ...♖a4+.

2) **1 ♖b5** ♔g6! 2 ♔d4 ♔f6! (not 2...♔f7? 3 ♖e5! and wins) 3 c4 ♔e6 drawing.

3) **1 ♖d3** ♖c8! 2 ♖g3+ (2 ♔d5 ♖d8+ 3 ♔c4 ♖c8+! 4 ♔b5 ♔f5 and 2 ♔e6 ♔f4! lead to a draw) ♔h4! 3 ♖e3 (3 ♖f3 ♔g4!) ♔g5 4 ♔d5 ♔f4 also with a draw.



413 =/–

*Original*

(**413**): It certainly isn't obvious that h1 is the best square for Black's rook, but the reason gradually becomes clear

if we look at the Black to play analysis:

1) **1...♖a1** (1...♖b1 is the same) 2 ♖g6! (2 ♖g7? ♖c1 3 ♖c7 ♔g5 4 ♔e3 ♔f5 5 ♔d4 ♔e6! draws) ♖c1 (2...♖a3 3 ♖c6! is the same) 3 ♖c6! ♔g5 4 ♔e3 ♖d1 (4...♔f5 5 ♔d4 is hopeless) 5 ♔e4! (Black's king is totally cut off) ♖d2 6 c4 and wins.

2) **1...♖c1** 2 ♖d3! (clearing the path for White's king) ♔g5 3 ♔e3! ♔f6 4 ♔d4! ♔e6 5 ♔c5! (5 ♔c4? ♖a1! 6 ♔b4 ♖a8! draws) ♖b1 6 c4 ♖b8 7 ♖d6+ ♔e7 (7...♔e5 8 ♖b6) 8 ♔d5 followed by c5 wins.

3) **1...♖d1** (1...♔h5 2 ♔e3 is hopeless) 2 ♔e2! ♖d8 (other moves are similar to lines 1 and 2) 3 ♖g1 ♔h5 (a four-file cut-off is more than enough, even when White's king is not in contact with the pawn) 4 ♔e3 ♔h6 5 c4 and so on.

4) **1...♖h2+** 2 ♔f3! ♖a2 (2...♖c2 3 ♔f4) 3 ♖g6 winning in a similar fashion to line 1.

With White to play:

1) **1 ♖d3** (1 ♔f3 ♖f1+! draws at once) ♔g5 2 ♔e3 ♖h4 draws easily.

2) **1 ♖g6** ♔h5! 2 ♖c6 ♖h3! 3 ♔e2 ♔g5! (not 3...♔g4? 4 ♖c5! and wins) 4 ♔d2 ♔f5! and Black's king is close enough to draw.

3) **1 ♖g7** ♖c1! 2 ♖c7 ♔g5 3 ♔e3 ♔f6 4 ♔d4 ♔e6! and White cannot prevent Black from continuing with ...♔d6.

The logic behind this position is that White has two attacking ideas, ♖d3 followed by ♔e3-d4 and ♖g6-c6 cutting off Black's king along a rank. The antidote to the first is to put the black rook on the fourth rank, while the second is met by cutting off White's king with ...♖h3. 1...♖c1 invalidates the first antidote, and so loses to 2 ♖d3!, while after 1...♖a1 the rook is the wrong side of the pawn to cut off White's king by playing to the third rank. Therefore 2 ♖g6! wins. Finally, 1...♖d1 fails for random tactical reasons (White frees his rook with gain of tempo). A subtle position.

Six of the eight reciprocal zugzwang positions in the ending of ♖+♙c3 v ♖ arise as diagrams 408-413. One more is mentioned after diagram 392. The eighth position is W♔b5, ♖c8, ♙c3 v B♔b3, ♖a4, but this is virtually identical to diagram 389.

**Practical tips:** Diagrams 392-396 have the greatest importance, but the over-the-board endings of diagrams 406 and 407 show how easily complex ideas arise in practical situations; in both cases a grandmaster failed to rise to the challenge.

## 3.6: Pawn on the second rank

This ending has not received a great deal of attention, perhaps because there are fewer practical examples than in the corresponding case with the b-pawn. Nevertheless, there are a number of interesting points. We make the familiar division:

3.6.1: Black's king is cut off along a rank 248
3.6.2: Black's king is cut off along a file 250
3.6.3: Other situations 255

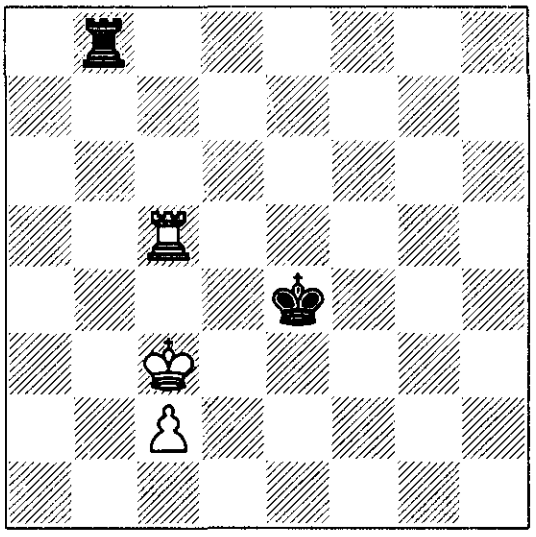
### 3.6.1: Black's king is cut off along a rank

There is relatively little to say about this case. Firstly, suppose that White's rook is on the fourth rank. Then shifting diagram 299 to the right gives W♔c1, ♖b4, ♙c2 v B♔e3, ♖c8. This is still winning for White, whoever is to move (1 ♔b2! with White to play). Shifting diagram 300 gives W♔c1, ♖h4, ♙c2 v B♔e3, ♖d8, which is again winning with White to move (1 ♔b2!) and drawing with Black to move (1...♖d4 or 1...♖b8). As usual in this type of position, control of the b-file is the deciding factor.

When White's rook is on the third rank he always wins, for example shifting diagram 301 gives W♔c1, ♖h3, ♙c2 v B♔e2, ♖d8 and White wins this whoever moves first.

Two positions we analysed with the b-pawn have different results with a c-pawn. In both cases the reason is the same, namely that Black has the possibility to transfer his king to the short side of the pawn, even though this may appear very unlikely in the initial position.

**(414):** This was reciprocal zugzwang with a b-pawn but here it is a draw whoever moves first. It is hard to imagine that the reason for this is that the a6-square is available for Black's king! For White to play see diagram 303. Black to play draws by 1...♖b7!

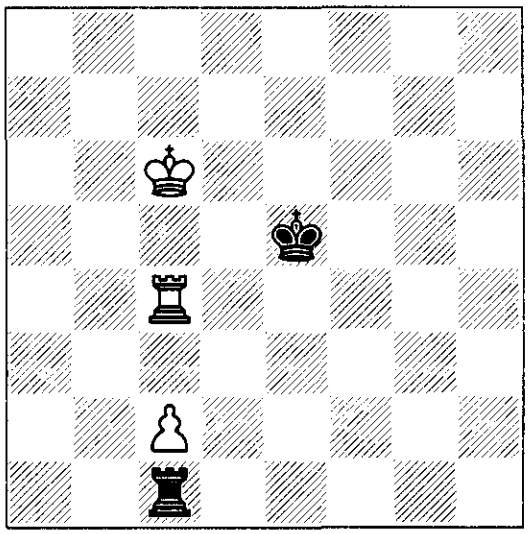


414 =/=

*Original*

(1...♔e3? 2 ♖e5+ ♔f4 3 ♔d4 wins as in diagram 303; for 1...♖b6? see below) 2 ♔c4 ♔e3! (2...♖b2? 3 c3!) 3 ♖c8 ♔d2! (3...♖b2? 4 ♔d5) 4 ♔d5 ♖h7 (4...♖d7+? 5 ♔c6!) 5 c4 ♔c3! 6 c5 ♔b4! 7 ♖b8+ (7 c6 ♖h5+ 8 ♔d6 ♖h6+! 9 ♔c7 ♔c5 10 ♔b7 ♔b5! draws) ♔a5! 8 c6 ♔a6! and after eight consecutive 'only moves' Black has arrived at a typical 'short-side' draw. However, note that if Black had played 1...♖b6? the rook would be on h6 at the end and White could win with c7.

**(415):** Once again this was reciprocal zugzwang with a b-pawn, but in this situation Black to move can save the game by 1...♔f6! (a very tricky move to find, but alternatives lose as in diagram 305) 2 ♖c5 ♔e7 3 ♔c7 ♔e6! 4 c4 ♖c2 (strangely enough, this move improves Black's position; if it were



415 =/=

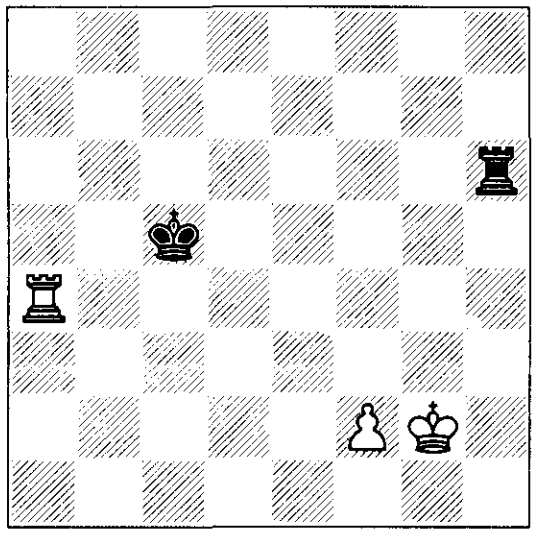
*Original*

White to play here he could win by 1 ♖c6+! ♔e5 2 ♔b6! ♔d4 3 ♖d6+! and Black cannot take the pawn on c4) 5 ♔b6 (now 5 ♖c6+ ♔e5! 6 ♔b6 ♔d4! is a draw after 7 c5 ♖b2+!) ♖b2+! 6 ♖b5 ♖c2! (6...♖d2? 7 ♔c6 loses as in diagram 305) 7 c5 ♔d7! 8 ♖b1 ♔c8 9 ♖h1 ♖b2+ 10 ♔c6 ♔b8! and draws because Black's king ends up on the short side.

However, two of the reciprocal zugzwangs given in section 2.6.1 are preserved when they are shifted to the right. One is diagram 304, which produces the reciprocal zugzwang W♔c4, ♖c6, ♙c2 v B♔e5, ♖e8. The other is the position mentioned after diagram 305. Shifting this gives W♔c5, ♖c3, ♙c2 v B♔e4, ♖c1, and the reciprocal zugzwang is maintained.

We conclude with one practical example.

**(416):** Using the unfortunate position of Black's rook, White succeeds in cutting off Black's king along a rank. 1 ♖a5+! and now:



416 +/

**Garcia Palermo – Meister**

*Bundesliga, 1990/1*

1) **1...♔b6** 2 ♖d5 with a further branch:

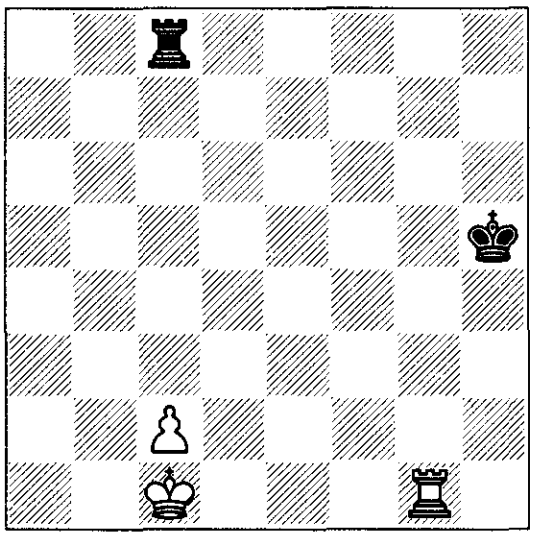
1a) **2...♔c6** 3 ♖d2 ♖h7 (preventing f4 due to the reply ...♖d7; 3...♖g6+ 4 ♔h3 ♖h6+ 5 ♔g4 ♖g6+ 6 ♔h5 ♖g2 loses to 7 ♔h4 ♔c5 8 ♔h3 ♖g8 9 f4!) 4 f3 ♖g7+ (Black would prefer to have his rook on the back rank but 4...♖h8 allows 5 f4) 5 ♔h3 ♖h7+ 6 ♔g4 ♖g7+ 7 ♔h4 ♖f7 8 ♖d3 (the threat is 9 ♔g5 forcing through f4, so Black's rook must go back) ♖f8 9 ♔g4 ♖g8+ 10 ♔f5 ♖f8+ 11 ♔e6 transposes to diagram 394.

1b) **2...♖g6+** 3 ♔h3 ♖f6 4 ♔g3 ♖g6+ 5 ♔h4 ♖f6 6 ♖d2 ♖f8 7 ♔g5 ♖g8+ 8 ♔f6 ♖f8+ 9 ♔g7 ♖f4 (9...♖f3 10 ♖d6+ ♔c5 11 ♖f6! ♖a3 12 f4 ♖g3+ 13 ♖g6 ♖f3 14 ♖g4! ♔d5 15 ♔f6! and wins) 10 ♔g6 (10 ♖d6+? ♔c5! 11 ♖f6 ♖g4+! followed by ...♔d5 draws) ♖f8 (or else ♔g5 forces f4) 11 ♖d6+ ♔c5 12 ♖f6! ♖g8+ 13 ♔f5! followed by f4 and Black's king is decisively cut off along a rank.

2) **1...♔d4** (the game continuation) 2 ♔g3! ♖g6+ (2...♔e4 3 f3+) 3 ♔f4! (3 ♔f3? ♖f6+ draws) ♖g8 4 f3 (we already know that such positions are lost) ♖b8 5 ♔g4 ♖g8+ 6 ♖g5 ♖f8 7 f4 ♔e4 8 ♖e5+! ♔d4 9 ♖e6 ♖g8+ 10 ♔h5 ♖h8+ 11 ♔g5 ♖g8+ 12 ♖g6 ♖c8 13 f5 (there is nothing Black can do as White edges slowly forwards) ♔e5 14 ♖g7 ♖f8 15 ♖e7+! ♔d6 16 f6 ♖g8+ 17 ♔f5 1-0.

### 3.6.2: Black's king is cut off along a file

The results are significantly different from the case of a b-pawn. With a b-pawn, a four-file cut-off does not always win, but here Black has no drawing chances.



417 +/–

*Chéron, 1923*

**(417):** Black cannot improve his position, so it doesn't make any difference who is to move. We take White to play: 1 ♔b2 ♖b8+ 2 ♔a3 ♖c8 3 ♔b3 ♖b8+ 4 ♔a4 and now:

1) **4...♖c8** 5 ♖c1 ♔g5 6 c4 ♔f6 7 ♔b5 (not 7 c5? ♔e6 8 ♔b5 ♔d7! drawing) ♔e6 (7...♖b8+ 8 ♔c6 ♔e7 9 ♔c7 followed by c5) 8 ♔b6! ♖b8+ (8...♔d7 9 ♖d1+) 9 ♔c7 ♖h8 10 c5 and wins.

2) **4...♖a8+** 5 ♔b5 ♖b8+ 6 ♔a6 ♖a8+ (6...♖c8 7 ♖c1! ♖c3 8 ♔b5 ♔g6 9 ♔b4! ♖c8 10 c4 ♔f6 11 ♖e1 with a winning cut-off) 7 ♔b7 ♖a3 (7...♖a4 8 ♖c1 ♖c4 9 c3 ♔g5 10 ♔b6 ♔f6 11 ♔b5! ♖c8 12 c4 ♔e6 13 ♔b6! winning as in line 1) 8 ♖g8 ♖a4 (8...♖c3 9 ♖c8! followed by c4) 9 ♖c8 ♔g6 10 c4 ♖b4+ 11 ♔a6! (11 ♔a7? ♔f6 draws) ♔f6 12 ♔a5! ♖b1 13 ♖e8 and Black is cut off.

If Black's king is on h7 in the initial position, then the manoeuvre with 8 ♖g8 doesn't work, but White has two alternative methods of winning. The first is by 1 ♖g3 followed by 2 c3 and the second is to play as in line 2 above, answering 7...♖a3 by 8 c4 ♖c3 9 ♖g4 ♔h6 10 ♔c6 ♔h5 11 ♖d4 ♔g6 12 c5, and White is heading for the Lucena position.

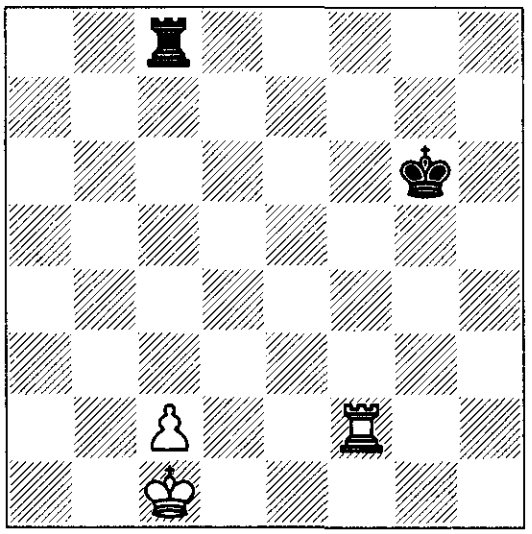
When Black's king is cut off by three files, the result depends on the exact position of the king. Suppose that we have W♔c1, ♙c2 and B♖c8, White's rook is on the f-file and Black's king is on the g-file. g5 is the best square for Black's king and gives a draw wherever White's rook is and whoever is to move. The full conclusions are as follows:

**B♔g6:** White to play wins with W♖f2 and W♖f3, but the result is a draw with W♖f1 and W♖f4.

**B♔g5:** Always drawn.

**B♔g4:** White to play wins with W♖f1 and W♖f7, but only draws with W♖f2 and W♖f6.

**B♔g3 or g7:** Always a win with White to play.



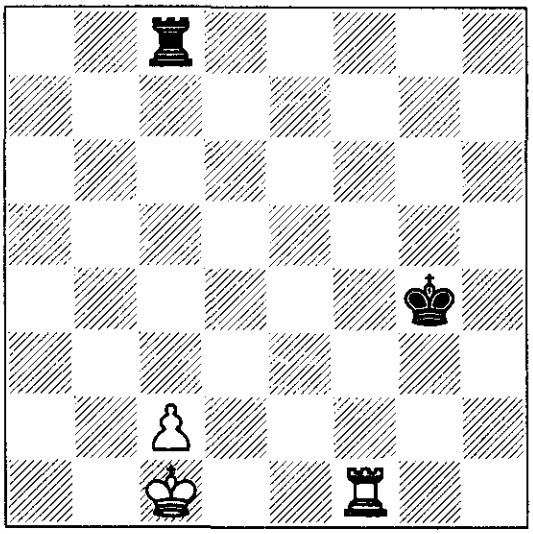
418 +/=

*Original*

**(418):** White to play wins by 1 ♔b2 ♖b8+ 2 ♔a3 ♖a8+ 3 ♔b4 ♖b8+ 4 ♔c5 ♖c8+ 5 ♔d5 ♖d8+ 6 ♔e6 ♖c8 (after 6...♖e8+ 7 ♔d7 ♖e4 8 ♔d6 Black cannot prevent c4) 7 ♖g2+ ♔h6 8 ♔d5 ♖d8+ 9 ♔c5 ♖c8+ 10 ♔b4 returning the king to c1, whereupon White continues ♖g1 and then wins as in diagram 417.

Black to play draws by 1...♔g5! 2 ♔d2 ♖d8+ 3 ♔e3 ♖e8+ 4 ♔d4 ♖d8+! 5 ♔e5 ♖e8+ 6 ♔d6 (6 ♔d5 ♖d8+! 7 ♔e6 ♖c8! 8 ♔d7 transposes) ♖c8! and White cannot make progress (7 ♔d7 ♖c3).

If White's rook starts on f3, then White to play wins by 1 c3 (Black to play draws by 1...♔g5!), but on other squares the c2-pawn is not defended so White cannot advance his king immediately, and this gives Black time for ...♔g5.

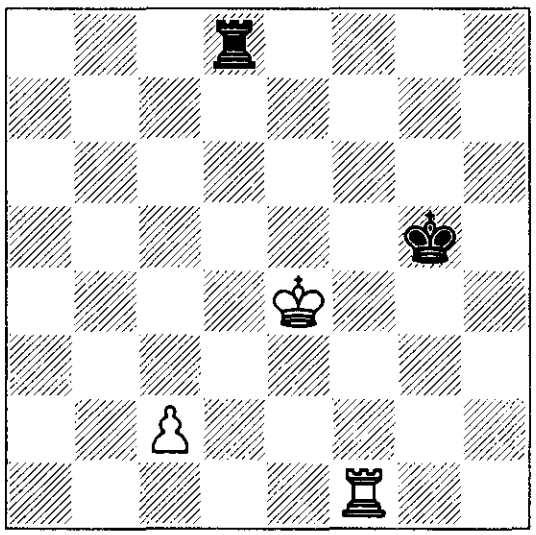


419 +/=

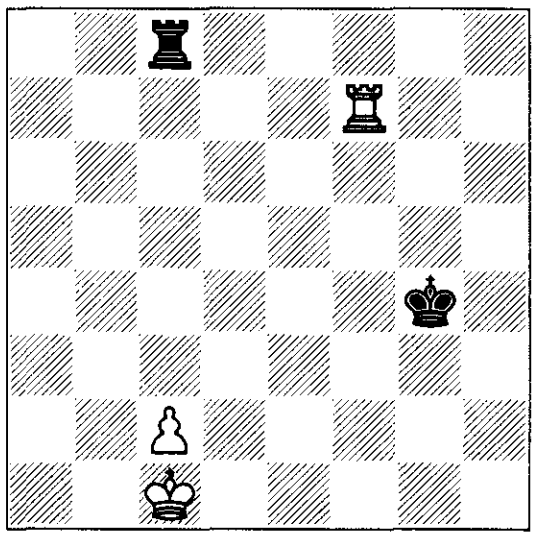
*Chéron, 1944*

**(419):** White to play wins by 1 ♔d2 ♖d8+ 2 ♔e3 ♖e8+ 3 ♔d4 ♖d8+ 4 ♔e4 ♖e8+ (4...♖c8 loses after the thematic 5 ♖g1+, but in this specific situation 5 ♖c1 is a much faster alternative) 5 ♔d5 ♖d8+ 6 ♔e6 ♖e8+ (6...♖c8 7 ♖c1! ♖c3 8 ♔e5! ♔g5 9 ♔d4 ♖c8 10 c4 ♔f6 11 ♖e1! with a winning cut-off) 7 ♔d6 ♖d8+ (7...♖c8 8 ♖c1! is the last bracket) 8 ♔c7 ♖d4 (8...♖d5 9 ♔c6) 9 ♖f6! ♖b4 (preventing a later ♔b6-c5 and c4) 10 ♖c6 ♔f5 11 ♔d6 (11 c4? ♔e5! draws), going the other way, followed by ♔c5 and c4. Note that this depends on the tactical point 11...♔f6 12 ♔c5+.

Black to play draws by 1...♔g5! 2 ♔d2 ♖d8+! 3 ♔e3 ♖c8 4 ♔d3 ♖d8+! 5 ♔e4 *(D)* and now there are two ways for Black to draw. We mention both because they can arise from other positions:



419a +/=



420 +/=

*Original*

1) **5...♖e8+** 6 ♔d5 ♖d8+! 7 ♔e6 ♖e8+! and now:

1a) **8 ♔d7** ♖e3! (8...♖e4? 9 ♖c1! ♖c4 10 ♔e6! ♖c3 11 ♔e5! ♔g6 12 ♔d4! ♖c8 13 c4! ♔f6 14 ♖e1! is winning for White) 9 ♖f8 (White would win if he could play ♖f6, but Black's king covers this square) ♖c3! 10 ♖c8 ♖xc8! draws.

1b) **8 ♔d6** ♖d8+! 9 ♔c7 ♖d4! 10 ♖c1 (once again ♖f6 would win, but Black's king is well-placed on g5) ♖c4+! 11 ♔d6 ♔f5! (11...♔f6? 12 c3! wins) 12 ♔d5 (12 c3 ♔e4!) ♖c3! 13 ♖f1+ (13 ♔d4 ♖c8 14 c4 ♔e6! and Black is too close) ♔g4! 14 ♖f2 ♔g3! 15 ♖d2 ♔f4 16 ♔d4 (16 ♖d4+ ♔e3! 17 ♖c4 ♔d2! draws, or 16 ♖h2 ♔e3 reaching the reciprocal zugzwang of diagram 424 with White to play) ♖c8 17 ♖f2+ ♔g3! and Black can defend.

2) **5...♖c8** 6 ♖f2 (when the rook is on f1, White's king cannot advance beyond the fourth rank; after 6 ♖c1 ♔f6 Black has an easy defence) ♖e8+ with a draw as in diagram 418 with Black to play.

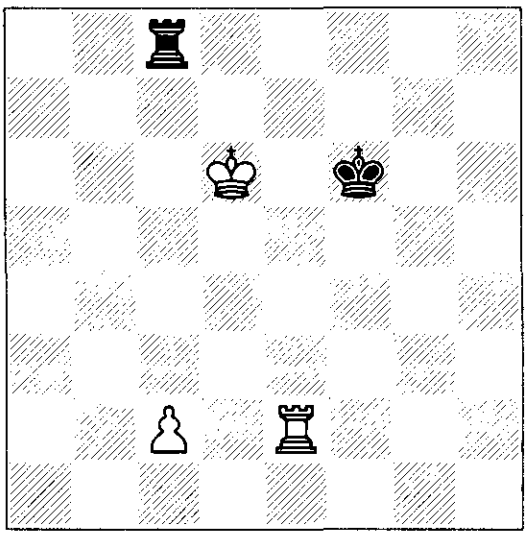
**(420):** White to play wins by 1 ♔d2 ♖d8+ 2 ♔e3 ♖e8+ 3 ♔d4 ♖d8+ 4 ♔e4 ♖e8+ (4...♖c8 5 ♖g7+ with a four-file cut-off) 5 ♔d5 ♖d8+ 6 ♔c6 ♖d4 7 ♔c5, followed by c4. Black to play draws by 1...♔g5!.

However, the same plan doesn't work if White's rook starts on f6, because Black plays 1 ♔d2 ♔g5! (it is too late after 1...♖d8+? 2 ♔c3! as now 2...♔g5 is met by 3 ♖b6 ♔f5 4 ♔b4 followed by c4) 2 ♖b6 ♔f5 3 ♔d3 ♖d8+ with a draw.

If Black's king is on g7, White wins easily by 1 ♖f3 and 2 c3, while if it is on g3 White wins just as in diagram 419.

There are a few winning positions when White's rook is on the e-file, but before we analyse these it is worth noting the following important position, which arises during the analysis of many ♖+♙c2 v ♖ positions.

**(421):** In fact this position is easier to win with Black to move, so we assume that White is to move. 1 ♔d5 (it



421 +/–

*Original*

is also possible to transfer the move to Black by 1 ♖e6+, 2 ♖e7+ and 3 ♖e2) ♖d8+ 2 ♔c5 ♖c8+ 3 ♔d6 (now Black must weaken his position) with the lines:

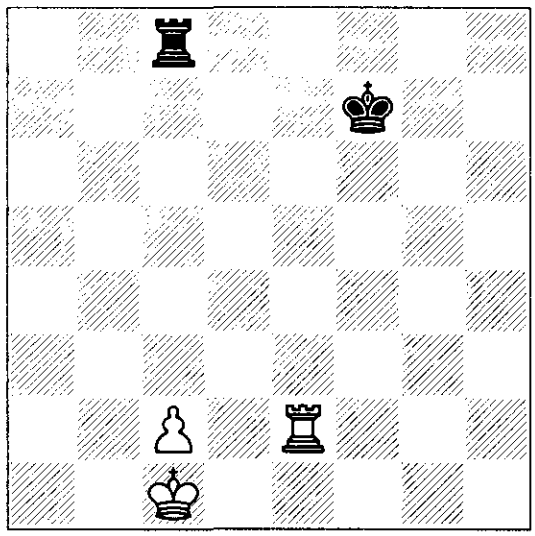
1) **3...♔f7** 4 ♔d7 ♖c3 (4...♖c4 is the same) 5 ♖f2+ ♔g7 (5...♔g6 6 ♔e6 is even worse because Black can be driven to the h-file) 6 ♔d6 ♖c8 (this is a second zugzwang position analogous to the original diagram; White wins by transferring the move to Black) 7 ♔d5 ♖d8+ 8 ♔e6 ♖c8 9 ♔d6 and now:

1a) **9...♔g6** (any rook move allows White to force c4) 10 ♔d5 ♖d8+ 11 ♔e6 (exploiting the king's position on g6) ♖c8 12 ♖g2+ ♔h6 13 ♔d5 and with a four-file cut-off, White wins as in diagram 417.

1b) **9...♔g8** 10 ♔d5 ♖d8+ 11 ♔e4 and White retreats his king to c1 when, thanks to Black's king position, White has time for ♖f3 and c3.

2) **3...♔g6** 4 ♔d5 ♖d8+ 5 ♔c6 ♖c8+ 6 ♔b7 ♖c3 (6...♖c4 7 ♔b6 ♖c8 8 ♖e6+ ♔f5 9 ♖c6! ♖b8+ 10 ♔c5!, followed by c4) 7 ♖e6+ ♔f5 8 ♖c6! ♖h3 9 c4 ♔e5 10 ♖c8! ♔d4 11 c5! ♖b3+ 12 ♔c6! ♖c3 13 ♖d8+ wins.

3) **3...♔f5** (or 3...♖c3 4 ♔d5 forcing through c4) 4 ♖e5+! ♔f6 5 ♖c5 ♖d8+ 6 ♔c7 ♔e7 7 c4 wins.



422 +/=

*Original*

(**422**): It is very surprising that White can win this position, because a two-file cut-off is normally drawn even when White's pawn is on c3. White wins by 1 ♔b2! (1 ♔d2? ♔f6! 2 ♔d3 ♖d8+! 3 ♔c4 ♔f5 4 c3 ♖c8+ draws as in diagram 394 with Black to play) and now:

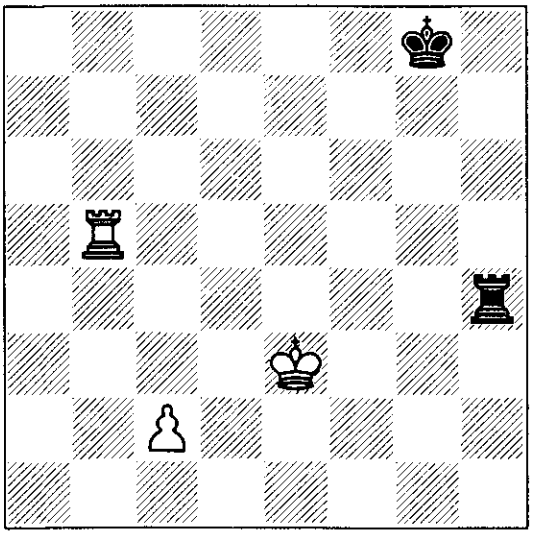
1) **1...♔f6** (Black relies on the fact that 2 c3 ♔f5 doesn't win to improve his king position) 2 ♔b3! ♖b8+ (a two-file cut-off does win against a pawn on c4, so now Black is forced to start checking) 3 ♔a4 (3 ♔c4? ♔f5 draws) ♖a8+ 4 ♔b4 ♖b8+ 5 ♔c5 (White must cross the c-file at c5 because only c4 is a genuine threat and even a single move without a threat would give Black time for ...♔f5)

♖c8+ 6 ♔d6 and we have diagram 421.

2) **1...♖b8+** 2 ♔a3 ♖a8+ 3 ♔b4 ♖b8+ 4 ♔c5 ♖c8+ 5 ♔d5 ♖d8+ 6 ♔c6 ♖c8+ 7 ♔d7 transposing into line 1 of diagram 421.

Black to play draws by 1...♔f6 2 ♔b2 ♔f5.

We end this section with a practical example.



423 /=

**Ehlvest – Ljubojević**

*Rotterdam World Cup, 1989*

**(423):** Black may try:

1) **1...♖c4?** 2 ♔d3! ♖c8 3 c3 (not 3 c4? ♔f7 4 ♖e5 ♖e8! drawing) ♖d8+ (3...♔f7 4 ♖e5! transposes to the game) 4 ♔c2! (not 4 ♔c4? ♔f7! 5 ♖e5 ♔f6! 6 ♖e3 ♔f5! drawing, as in diagram 394 with Black to play) ♔f7 5 ♖e5! transposes to the game.

2) **1...♔f8?** 2 ♖e5! ♔f7 (there is nothing better) 3 ♔d3! ♖h8 (3...♔f6 4 ♖e2 and now 4...♖h7 is forced, in order to meet c4 by ...♖e7, but then 5 ♔d4 wins easily) 4 c3 ♔f6 5 ♖e3! winning as in the game.

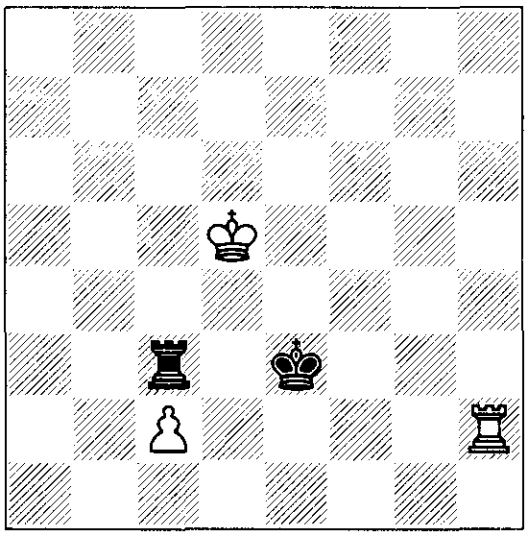
3) **1...♔f7!** (the game continuation is the only move to draw) 2 ♖e5 and now:

3a) **2...♔f6** (2...♖h8 is the only other drawing move, with similar play) 3 ♖e8 ♔f7! 4 ♖e4 ♖h8! 5 ♔d4 (5 c4 ♖e8 or 5 c3 ♖d8) ♖d8+! and White cannot advance his king because the c-pawn is undefended.

3b) **2...♖c4?** (Ljubojević's move loses) 3 ♔d3! ♖c8 4 c3 (4 c4? ♖e8! draws) ♔f6 (4...♖d8+ 5 ♔c2! is similar) 5 ♖e3! (Ehlvest is heading for diagram 394 with White to play; other moves lose a tempo and only draw, for example 5 ♖e2 ♖d8+! 6 ♔c2 ♖c8 7 ♖e3 ♔f5!) ♖d8+ 6 ♔c2! (not 6 ♔c4? ♔f5! drawing) ♔f7 (6...♖c8 is exactly diagram 394) 7 ♔b3 (not 7 c4? ♖e8!) ♖b8+ 8 ♔c4 (8 ♔a4 would have reduced Black's options and was therefore slightly better for practical reasons) ♖c8+ (or 8...♔f6 9 ♔c5 ♖c8+ 10 ♔d6 reaching the position after White's sixth move in diagram 394) 9 ♔b5 ♖b8+ 10 ♔c6 ♖c8+ 11 ♔d7 ♖c4 12 ♔d6 ♖c8 13 ♖e7+ ♔f6 14 ♖c7 (cutting the king off along a rank ensures the pawn's advance) ♖d8+ 15 ♔c6 ♔e6 16 c4 ♔e5 17 c5 ♔d4 18 ♔b7 ♖d5 19 ♔b6 ♔c4. At this point the game was adjourned with Ehlvest (White) sealing his next move. When the envelope was opened it turned out that Ehlvest had written ♖f2-a2 as his sealed move. Apparently he intended the decisive ♖c7-h7, but had written the move as if the board were turned round. Ljubojević sportingly accepted that the intent of the move was clear and immediately resigned.

### 3.6.3: Other situations

We content ourselves with a miscellaneous collection of interesting positions.

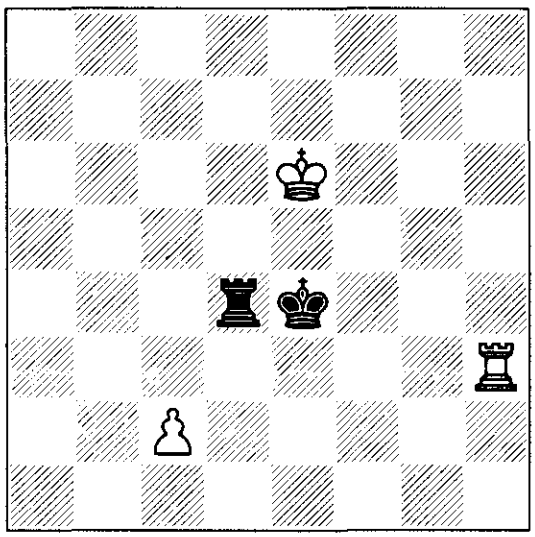


424 =/–

*Original*

**(424):** We start with a simple reciprocal zugzwang. Black to play must allow White to play c4, for example 1...♖c8 2 c4! ♖d8+ 3 ♔c5! ♖c8+ 4 ♔b4 ♔d4 (4...♖b8+ 5 ♔c3! ♔e4 6 ♖h5 wins) 5 ♖d2+ ♔e5 (5...♔e3 6 ♖d5) 6 c5! wins, or 1...♔f4 2 ♔d4 ♖c8 3 c4! ♔f5 (3...♖d8+ 4 ♔c5! ♖c8+ 5 ♔d6 wins) 4 ♖e2 ♖d8+ 5 ♔c5 ♖c8+ 6 ♔b5 ♖b8+ 7 ♔a6 ♖c8 8 ♖c2 ♔e6 9 ♔b7 and wins. White to play cannot make progress: 1 ♖g2 (1 ♔e5 ♖c8) ♔f3! 2 ♖d2 ♔f4 transposes to line 1b of diagram 419.

**(425):** This is also easy to understand, because after 1...♔f4 (1...♖d8 2 ♖h4+! ♔e3 3 c4! wins easily, and other moves along the d-file are met the same way) 2 c4 the c-pawn cannot be stopped. With White moving first:

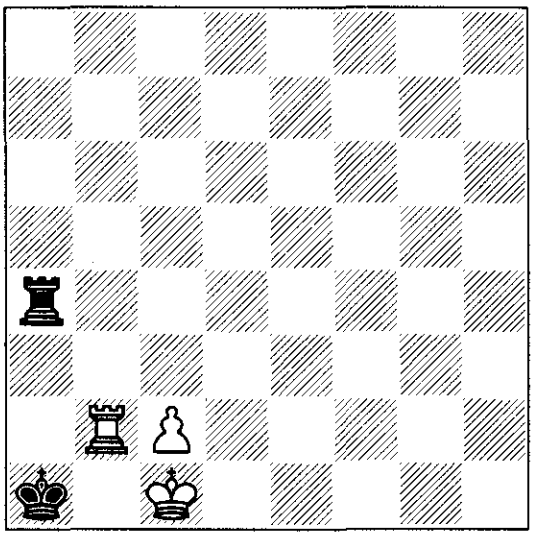


425 =/–

*Original*

1) **1 ♖g3** ♖d2 2 ♖g4+ (2 c4 ♔d4!) ♔f3! 3 ♖c4 ♔e3 4 ♔e5 (4 ♖c8 ♖h2) ♖d8! 5 ♖h4 ♖c8 6 c4 ♔d3! 7 ♔d5 ♖d8+! draws.

2) **1 ♖h8** (other rook moves along the h-file are also met by ...♔e3) ♔e3! 2 ♖c8 ♔d2 3 ♔e5 ♖h4 4 c4 ♔c3 is an easy draw.



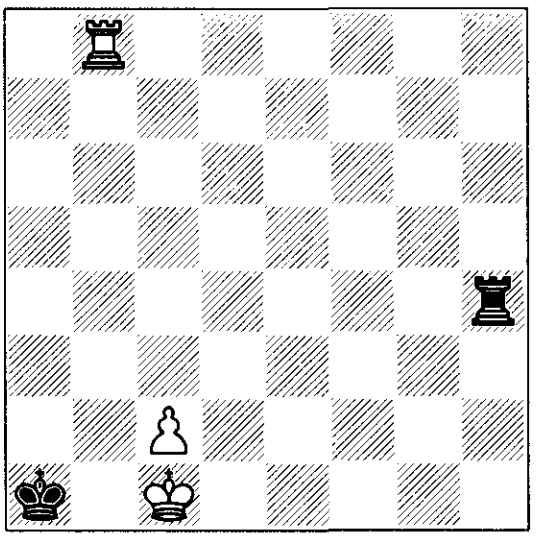
426 =/–

*Original*

**(426):** This reciprocal zugzwang is much more complex. Black to play

continues 1...♖h4 (1...♖a8 2 c4! ♖h8 3 ♖d2 ♖c8 4 ♖c2! ♖c5 5 ♔d2 ♔b1 6 ♔d3! ♖h5 7 ♖e2 and Black is doomed by his vile king position) and now we will show that 2 ♖b8 and 2 ♖b5 win, but 2 ♖b7 and 2 ♖b6 only draw:

1) **2 ♖b8** *(D)* with two possible continuations:



426a +/–

1a) **2...♖a4** 3 c3 (White must prevent Black's king escaping up the a-file or Black will reach a 'short side' draw) ♔a2 4 ♔c2! ♔a3 5 ♖h8 (preparing to switch to the first rank; the immediate 5 ♖b1? is worse because 5...♔a2 6 ♖h1? ♖g4 draws) ♔a2 (after 5...♖a7 6 ♖h1! ♔a2 7 c4 ♖g7 8 ♔c3 Black's king is restrained) 6 ♖d8 ♔a3 (6...♖a7 7 c4) 7 ♖d4 (White must play his rook to this key square when the black king is on a3, so that a subsequent ♖d1 occurs with gain of tempo) ♖a8 8 ♖d1! ♔a2 9 c4 (this is possible now that Black's rook has been driven away from the a4-square) ♖h8 10 ♔c3 ♖h3+ 11 ♔b4 and Black's king is blocked.

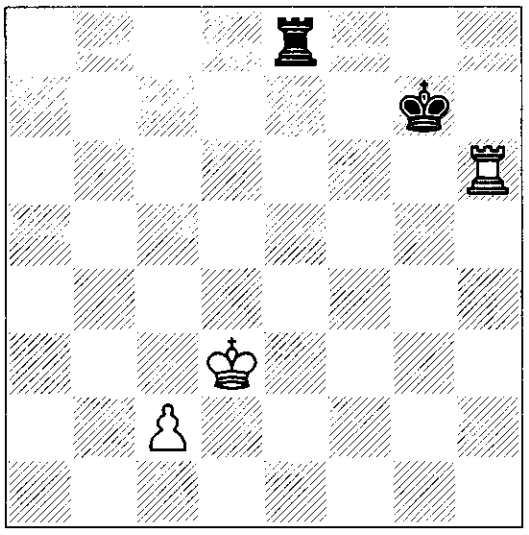
1b) **2...♖h1+** 3 ♔d2! ♔a2 (trying to run up the a-file) 4 ♔c3! (a fantastic move based on the fact that it is more important to head off Black's king than to advance the pawn immediately; not 4 c4? ♔a3! 5 ♔c3 ♖h3+! 6 ♔d4 ♔a4 drawing) ♖h2 (4...♖g1 5 ♖a8+ ♔b1 6 ♔b3 ♖g7 7 c4 starts the pawn moving while 4...♖h3+ 5 ♔b4 ♔b2 6 ♖c8! ♖h7 7 c4 ♖b7+ 8 ♔c5! ♔c3 9 ♔c6 followed by c5 is decisive) 5 ♖c8 (threatening ♔b4 winning as in the previous bracket) ♖h4 6 ♖a8+ ♔b1 7 ♔b3 followed by c4 and wins.

2) **2 ♖b7?** ♖h1+! (2...♖a4 loses as above) 3 ♔d2 ♔a2! (3...♖h3 4 c4! ♔a2 5 c5! ♔a3 6 c6! ♖h8 7 c7 ♖c8 8 ♔c3 wins) 4 ♔c3 ♖h3+! 5 ♔b4 ♔b2! 6 ♖c7 ♖h8! (occupation of the eighth rank makes a huge difference) 7 c4 ♖b8+! 8 ♔c5 ♔c3 and White cannot free himself.

3) **2 ♖b6?** ♖h1+! 3 ♔d2 ♖h3! (threatening ...♔a2) 4 c4 (this move wins when White's rook is on b5, b7 or b8; what is special about b6?) ♔a2! 5 c5 ♔a3! 6 c6 ♖h8! 7 ♔c3 (7 c7 ♖c8! draws) ♔a4! 8 ♔c4 ♔a5! 9 ♖b1 ♔a6 and Black has reached a short-side draw. b6 is an especially bad square because when the rook is on b8 Black cannot play 6...♖h8 (and 6...♖h7 is met by 7 ♖b7), when the rook is on b7 White saves a tempo and wins by 7 c7, and finally on b5 Black's king can be cut off (see line 3 below). With the rook on b6 none of these positive factors operates and White cannot win.

4) **2 ♖b5** ♖h1+ 3 ♔d2! ♔a2 (after 3...♖h3 4 c4! ♔a2 5 c5! ♔a3 6 c6! ♖h8 7 ♔c3! ♔a4 8 ♖c5 White cuts off

Black's king) 4 ♔c3! ♖h3+ 5 ♔b4! ♔b2 6 c4 (this move wasn't possible with the rook on b7 or b8) ♔c2 (or 6...♖h4 7 ♖g5 followed by ♔b5 and c5) 7 c5 ♖h4+ 8 ♔a5! ♖h6 9 ♖b8 and wins.



427 +/

*Original*

**(427):** I used this position in a test. Eight grandmasters were asked to evaluate the position and give analysis. Of the eight, five thought the position was a draw, while three evaluated it as a win after 1 ♖h4. Nobody found the only move to win.

**1 ♖h2!**

Other moves fail:

1) **1 ♖h3** ♖d8+! (1...♔f7 2 ♖f3+! ♔g7 3 c4) 2 ♔c4 (2 ♔e4 ♔f6) ♖c8+ (or 2...♔f6 and White cannot play ♔c5) draws.

2) **1 ♖h4** ♔f6! (1...♖d8+? 2 ♖d4! ♖c8 3 ♖f4! ♖d8+ 4 ♔e3 ♖e8+ 5 ♔d4 ♖d8+ 6 ♔e5 ♖e8+ 7 ♔d6 and the white pawn will advance to c4; also not 1...♔g6? 2 c4!) 2 ♖f4+ (2 c4 ♔e6, 2 c3 ♖d8+ and 2 ♖e4 ♖d8+! all draw) ♔g5! and now 3 ♖f1 ♖d8+! draws as in diagram 419, while 3 ♖f2 ♖d8+! 4 ♔e4 draws by diagram 418. Other rook moves are no help because a king on g5 draws against any White rook position.

**1 ... ♖d8+**

Forced; the threat was 2 c4 and 1...♔f6 is met by 2 ♖f2+ followed by 3 c4. Now White must avoid 2 ♔e4? ♔f6.

**2 ♔c4 ♔f6**

Or 2...♖c8+ 3 ♔d5 ♖d8+ (3...♔f7 4 ♖e2 ♖d8+ 5 ♔c6 ♖c8+ 6 ♔d7 transposes to diagram 421, line 1) 4 ♔e5 ♖c8 5 ♔e6 and now both 5...♖c5 6 ♔d6 ♖c8 7 ♖f2 and 5...♔g8 6 ♖f2 ♔g7 7 ♔d6 transpose to the same zugzwang position from line 1 of diagram 421.

**3 ♔c5 ♖c8+**
**4 ♔d5!**

Not 4 ♔d6? and now:

1) **4...♔g5!** (the only move to draw) 5 ♖f2 ♔g4 and Black's counterattack against White's rook suffices to draw.

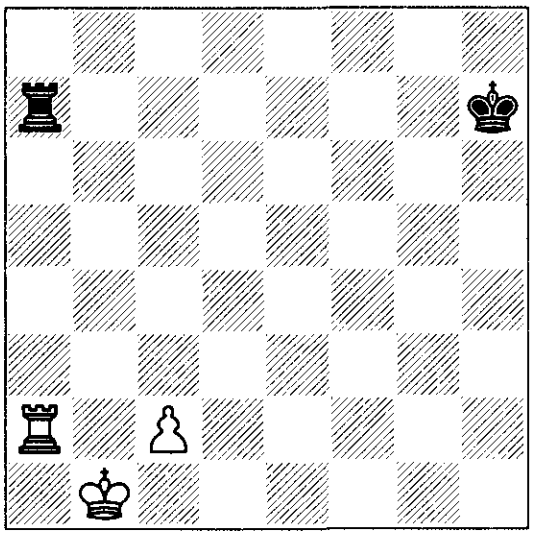
2) **4...♔f5?** 5 ♖h5+! ♔e4 (5...♔f6 6 ♖c5 ♖d8+ 7 ♔c7! ♔e7 8 c4 wins) 6 ♖h4+! ♔f5 7 c4 wins.

3) **4...♔f7?** 5 ♔d7 ♖c3 6 ♖f2+ as above.

The main line continues **4...♖d8+ 5 ♔c6! ♖c8+ 6 ♔d7! ♖c3 7 ♔d6!** (not 7

♖e2? ♔f5 8 ♔d6 ♔f4 9 ♔d5 ♔f3! 10 ♔d4 ♖c8 drawing) **♖c8** (or 7...♔f7 8 ♖e2, threatening ♔d5, when 8...♖c8 9 ♔d7 is diagram 421 again) **8 ♖e2!** (the obvious 8 ♖f2+? only draws after 8...♔g5 as in the note to White's 4th, line 1) **♔f5** (8...♔f7 9 ♔d7 is diagram 421 once more) **9 ♖e5+! ♔f6** (9...♔f4 10 ♖c5!) **10 ♖c5 ♖d8+ 11 ♔c7!** followed by c4 and wins.

We finish with the longest win in the ending of ♖+c♙ v ♖.



428 /–

*Original*

(**428**): White can promote his pawn in 57 moves with best play. The analysis runs 1...♖c7 (1...♖b7+ 2 ♖b2! ♖c7 3 ♖b6! ♔g7 4 ♖e6! ♔f7 5 ♖e2! transposes to line 2 below) 2 ♖a6! (it is important to keep Black's king boxed in; after 2 ♖a5? ♔g6! 3 ♖e5 ♔f6 4 ♖e2 ♖c8 5 ♔b2 ♔f5 Black draws as in diagram 422) ♖b7+ (this forces very accurate play by White; 2...♔g7 3 ♖e6! transposes to line 2) and now White can only win with a remarkably subtle manoeuvre:

1) **3 ♔c1?** (White wants his king on c1, but only when Black's rook is on d7; therefore this is wrong) ♔g7! 4 ♖e6 ♔f7 5 ♖e2 ♔f6 (Black aims to set up a drawing position with his king on f5 and rook on b8) 6 ♔d2 (now we see the problem; White's king can only emerge via the d-file, but on that side there is little space) ♖b8 7 ♔d3 ♖d8+! 8 ♔c4 (playing c4 is a real threat, but playing c3 is not; unfortunately White has to put his king on the c-file at c4, but this creates no real threat, so Black has a free move to improve his position) ♔f5 with a draw, as in the note to White's first move in diagram 422.

2) **3 ♔a2** (White aims to play his king right round the pawn to approach c1 from the other side, when Black's rook ends up on d7, allowing White's king to emerge via b2, when by zigzagging up the a- and b-files White can cross the c-file at c5) ♖c7 4 ♔b3 ♖b7+ 5 ♔c3 (threat 6 ♔d4 ♖d7+ 7 ♔c5) ♖c7+ (5...♔g7 6 ♔d4 releases White's king for a win after 6...♔f7 7 ♔d5 ♔e7 8 ♔c6! ♖b4 9 ♔c7! ♖d4 10 ♖c6! ♖d7+ 11 ♔c8 ♖d6 12 ♔b7 ♖d1 13 c4 ♔d7 14 c5 and the pawn is too strong) 6 ♔d2 ♖d7+ (6...♔g7 7 ♖e6! ♔f7 8 ♖e2! gives White a tempo more than in line 1 and he wins after 8...♖c8 9 ♔d3! or 8...♔f6 9 ♔d3!, as in the main line) 7 ♔c1! ♔g7 8 ♖e6! ♖b7 (8...♔f7 9 ♖e2! ♖d8 10 ♔b2! transposes to diagram 422) 9 ♔d2! ♖b8 (Black delays ...♔f7 because White's task is slightly easier when his c-pawn is defended by ♖e2) 10 ♔c3 (another tricky move; Black has nothing better than checking because 10...♔f7 11

♖e2! ♔f6 12 ♔d4! ♖d8+ 13 ♔c5 transposes to diagram 422) ♖c8+ 11 ♔b3 ♖b8+ (11...♔f7 12 ♖e4 followed by c4 is much faster) 12 ♔a4 ♖c8 13 ♖e2! ♔f6 14 ♔b4 ♖b8+ (now we have transposed to diagram 422) 15 ♔c5 (White threatens c4 at every move, so Black has no time for ...♔f5) ♖c8+ 16 ♔d6 ♔f7 17 ♔d7 ♖c3 18 ♖f2+ ♔g7 19 ♔d6 ♖c8 20 ♔d5 ♖d8+ 21 ♔c5 ♖c8+ 22 ♔d6 ♔g6 23 ♔d5 ♖d8+ 24 ♔e6 ♖c8 25 ♖g2+ ♔h6 26 ♔e5 ♖e8+ 27 ♔d4 ♖d8+ 28 ♔e3 ♖e8+ 29 ♔d2 ♖d8+ 30 ♔c1 ♖c8 31 ♖g1 ♔h5 32 ♔b2 ♖b8+ 33 ♔a3 ♖c8 34 ♔b3 ♖b8+ 35 ♔a4 ♖a8+ 36 ♔b5 ♖b8+ 37 ♔a6 ♖a8+ 38 ♔b7 ♖a3 39 ♖g8 ♖a4 40 c3 (after an incredible 40 moves White finally advances his pawn) ♔h6 41 ♖a8 ♖c4 42 ♖c8 ♖a4 43 c4 ♖b4+ 44 ♔a6 ♔g6 45 c5 ♔f7 46 ♖d8 ♔e7 47 ♖d1 ♖c4 48 ♔b6 ♖b4+ 49 ♔c7 ♖b2 50 c6 ♖c2 51 ♔b7 ♖b2+ 52 ♔c8 ♖b3 53 c7 ♖b2 54 ♖a1 ♖b3 55 ♖a7 ♖b2 56 ♖b7 ♖c2 57 ♔b8 and next move the pawn finally arrives on c8.

There are five reciprocal zugzwangs in the ending of ♖+♙c2 v ♖. Two were mentioned after diagram 415 and the other three are diagrams 424, 425 and 426.

**Practical tips:** The comments at the start of section 3.6.1 are important, and over-the-board players should know diagram 417 and have some idea that there are winning chances in positions such as diagrams 418-422. However, the details are quite complex.

# 4 ♖+d♙ v ♖

Many of the ideas in this chapter are similar to those we have seen before with the b- and c-pawns, but there is one major difference. The distinction between 'short' and 'long' sides of the pawn assumes much greater significance with the d-pawn, and practically every basic position comes in two forms depending on the location of Black's king.

The addition of one extra file may not seem important, but in many cases, for example when Black is giving lateral checks with his rook, the difference may be worth half a point.

## 4.1: Pawn on the seventh rank

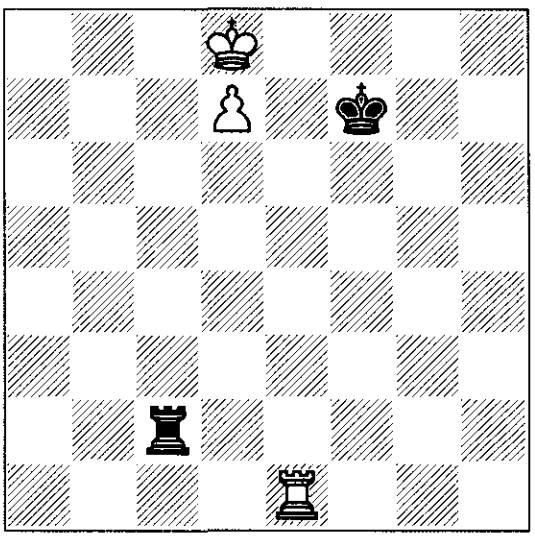
As usual, there is a further division:


4.1.1: White's king is in front of the pawn 260
4.1.2: White's rook is in front of the pawn 262
4.1.3: White's rook defends the pawn from the side 262
4.1.4: Other situations 265


### 4.1.1: White's king is in front of the pawn

When White's pawn is on d7 and his king is on d8, then Black has very few drawing chances if his king is on the long side of the pawn.

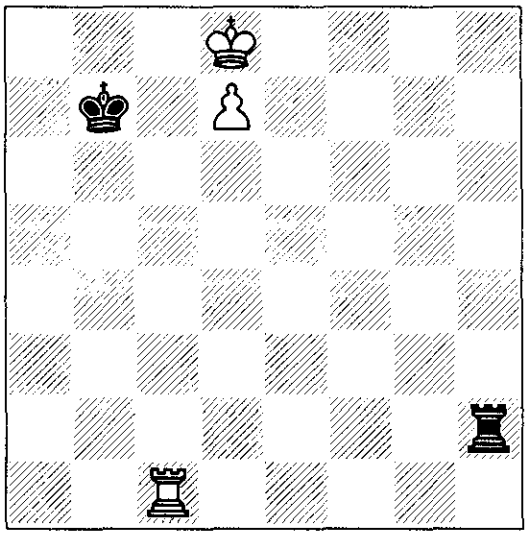
**(429):** This is the standard Lucena win. It doesn't matter who moves first, so we take White to move: 1 ♖f1+ ♔g7 (1...♔g6 2 ♔e8 ♖e2+ 3 ♔f8 ♖d2 4 ♖f7 followed by ♔e8, ♖e7 and d8♕) 2 ♖f4 (preparing to interpose on d4 later) ♖c1 3 ♔e7 ♖e1+ 4 ♔d6 ♖d1+ 5 ♔c6 ♖d2 (5...♖c1+ 6 ♔d5 ♖d1+ 7 ♖d4) 6 ♖c4 ♔f7 7 ♔c7 ♔e7 8 ♖e4+ wins.



429 +/–

If Black's king is on the short side of the pawn, then Black has one drawing

chance, which is to start lateral checks immediately.



430 +/=

**(430):** White to move wins by 1 ♖b1+ ♔a7 2 ♖b4 (2 ♖d1 is also good) ♖e2 (2...♖h8+ 3 ♔c7 wins at once) 3 ♔c7, just as in the previous diagram. Black to play draws by 1...♖h8+! 2 ♔e7 ♖h7+! 3 ♔e6 ♖h6+! (3...♖h8? 4 ♖h1 ♖g8 5 ♔f7 ♖a8 6 ♔e7 wins) 4 ♔e5 ♖h5+! (4...♖h8? 5 ♖h1! ♖g8 6 ♔d6 ♖g6+ 7 ♔e7! ♖g7+ 8 ♔e8 ♖g8+ 9 ♔f7 wins as in the last bracket) 5 ♔f6 ♖h6+! 6 ♔g5 ♖d6 draws.

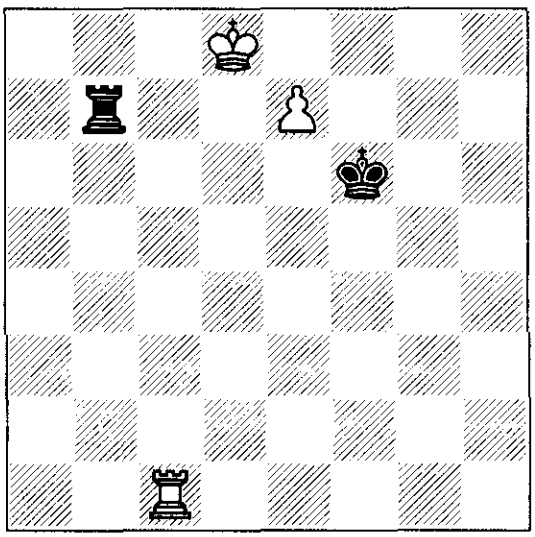
Let's modify diagram 430 and see the effect, supposing Black is to move (White always wins if he is to move). First of all Black still draws if his king is on b6: 1...♖h8+! 2 ♔e7 ♖h7+! 3 ♔e6 ♖h6+! 4 ♔d5 ♖h5+! 5 ♔d4 (5 ♔c4 ♔c7) ♖h4+! and there is no shelter from the checks. However with the king on b8 White wins by 1...♖h8+ 2 ♔e7! ♖h7+ 3 ♔d6 ♖h6+ (3...♖h8 4 ♖b1+ and 5 ♔c7) 4 ♔e5 ♖h8 (4...♖h5+ 5 ♔f6 ♖h8 6 ♖h1 wins) 5 ♔f6 ♔b7 (Black cannot meet the threat of ♖h1) 6 ♖h1! ♖g8 7 ♔f7 ♖a8 8 ♔e7 and wins.

Now put the king back on b7 and try moving Black's rook. Black loses if his rook starts on g2: 1...♖g8+ 2 ♔e7! ♖g7+ 3 ♔e8 ♖g8+ 4 ♔f7 ♖h8 5 ♖h1! ♖a8 6 ♔e7 and wins. This shows that Black needs the full checking distance in order to draw. Now put Black's rook back on h2 and move White's rook to e1. In this case White wins by 1...♖h8+ 2 ♔e7 ♖h7+ 3 ♔d6 ♖h6+ 4 ♖e6 ♖h8 5 ♖e8 ♖h6+ 6 ♔e5 ♖h5+ 7 ♔f6 and so on. If White's rook starts on f1 then he also wins by interposing his rook, but if the rook starts on g1 then Black can draw: 1...♖h8+! 2 ♔e7 ♖h7+! 3 ♔e6 ♖h6+! 4 ♔f7 ♖h7+ and if White plays ♖g7 then Black can exchange rooks. Black also draws if White's rook starts on f6 or g6. We take g6 as an example: 1...♖h8+! 2 ♔e7 ♔c7! 3 ♖g7 ♖d8! 4 ♔e6 ♖h8! (4...♖b8? and 4...♖f8? both lose to 5 ♖g1) and White cannot make progress. Finally, if White's rook starts on e6 then he wins: 1...♖h8+ 2 ♖e8! (2 ♔e7? ♔c7! draws) ♖h7 (2...♖h1 3 ♔e7) 3 ♖e1 ♖h8+ and wins as in the case with White's rook on e1.

**(431):** Even though Black's king is actually attacking the pawn, White can still win: 1...♖b8+ and now there are two different paths to victory:

1) **2 ♔c7** ♖a8 (2...♖e8 3 ♔d6! ♖a8 4 ♖f1+ ♔g7 5 ♖a1 is the standard win) 3 ♖a1! ♖e8 4 ♔d6! ♖b8 5 ♖f1+ ♔g7 6 ♔c7 ♖a8 7 ♖a1 and White is winning.

2) **2 ♔d7** ♖b7+ 3 ♔d6 ♖b6+ 4 ♔c7 ♖e6 5 ♔d8! ♖d6+ 6 ♔e8! (threat

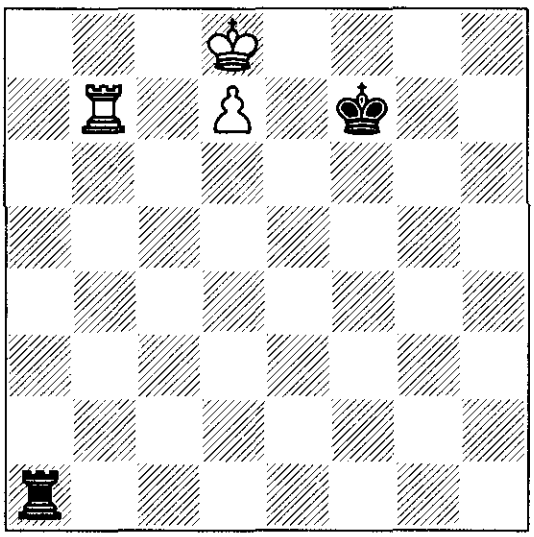


431 /–

*Grigoriev, 1937 (end of study)*

♔f8) ♔g7 7 ♖g1+ followed by ♔f7 winning.

If Black's rook is on the short side of the pawn, then he will have less checking distance and will normally lose, as in diagram 430 when Black's rook starts on g2. However, there are one or two exceptional positions.



432 +/=

**(432):** Black draws by 1...♖a8+! 2 ♔c7 ♔e7! 3 ♖b1 ♖a7+! 4 ♔c8 ♖a8+! 5 ♔b7 ♖d8 winning the pawn.

However, if White's rook starts on b6 then he wins: 1...♖a8+ (1...♖c1 2 ♖b4 followed by ♖f4+ wins as in diagram 429) 2 ♔c7! ♔e7 3 ♖a6! ♖h8 4 ♖a1 and 5 ♖e1+.

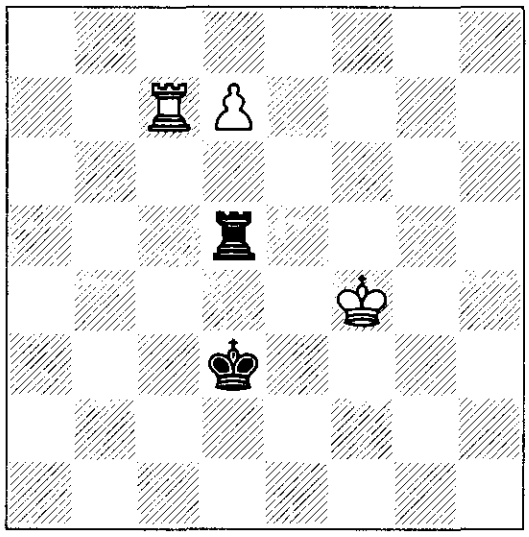
### 4.1.2: White's rook is in front of the pawn

In this case the results are very similar to those in section 3.1.2. Shifting diagrams 328 and 329 give W♔b7, ♖d8, ♙d7 v B♔b5, ♖d3 and W♔f5, ♖d8, ♙d7 v B♔b5, ♖e3 respectively. The results remain unchanged (+/= for 328 and +/– for 329). There are three reciprocal zugzwangs in this section, but all are derived from previous examples. The first is W♔b7, ♖d8, ♙d7 v B♔d5, ♖d6, which goes all the way back to diagram 11. The second is obtained from this one by reflection, i.e. by transferring White's king to f7, and the third is W♔h4, ♖d8, ♙d7 v B♔g6, ♖g7, which is based on diagram 18.

### 4.1.3: White's rook defends the pawn from the side

As with the c-pawn, this is the most interesting case, even though there are many similarities to the analysis in chapters 2 and 3. The reciprocal zugzwang from diagram 22 still holds (W♔f7, ♖e7, ♙d7 v B♔f5, ♖d8) and may be reflected about the d-file (W♔b7, ♖c7, ♙d7 v B♔b5, ♖d8). The reciprocal zugzwang of diagram 187 is also preserved when it is shifted to the right (W♔f5, ♖c7, ♙d7 v B♔d5, ♖d6) and it may be reflected to give

the position W♔b5, ♖e7, ♙d7 v B♔d5, ♖d6. However, diagram 188 is altered.



433 +/–

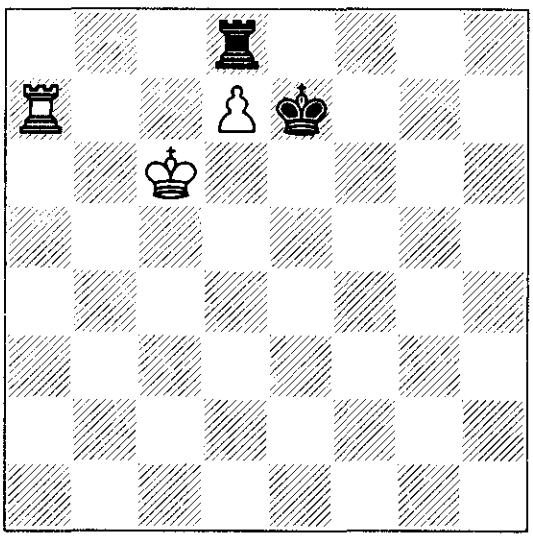
*Mandler, 1953*
*Prace*

(**433**): Black to play loses as before, but now White to play can win: 1 ♖b7! (1 ♖c1 ♔d2 and 1 ♖a7 ♔d4 lose time as White must return to c7) and now:

1) **1...♔c4** 2 ♔e4! ♖d1 3 ♔e5 ♔c5 4 ♔e6! ♔c6 5 ♖a7! ♖e1+ (5...♖d2 6 ♔e7 is similar) 6 ♔f7 ♖d1 7 ♔e8 ♖e1+ 8 ♔d8! ♔b6 9 ♖c7 (not 9 ♔c8? ♔xa7! 10 d8♕ ♖c1+ drawing) ♖a1 10 ♖c2 ♖a3 11 ♖d2 and the king emerges next move.

2) **1...♔d4** 2 ♖a7! (this explains why White had to play 1 ♖b7 followed by 2 ♖a7, and not the other way round; with the rook on a7 Black cannot play ...♔c5) ♖d6 (2...♔c4 3 ♔e4! is just like line 1, while 2...♔d3 3 ♖c7! transfers the move to Black) 3 ♔f5! (3 ♖c7? ♖f6+! 4 ♔g5 ♖d6! 5 ♔f5 ♔d5! is reciprocal zugzwang with the wrong player to move) ♔c5 (3...♔d5 4 ♖c7! is reciprocal zugzwang with the right player to move) 4 ♔e5! ♖d1 5 ♔e6! winning as in line 1.

There are some new reciprocal zugzwang positions with a d-pawn. The first is elementary but has considerable practical importance.



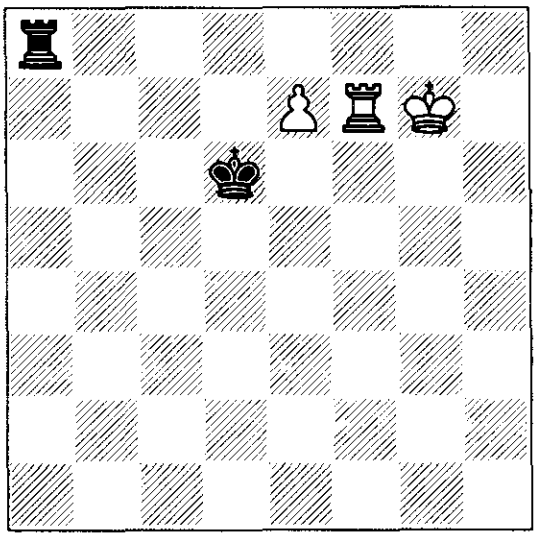
434 =/–

(**434**): Black to play loses after 1...♖f8 2 ♖a1 (threat ♔c7) ♖f2 3 ♖e1+ or 1...♔e6 2 ♖a1 ♖h8 3 ♖e1+ and 4 ♔c7. White to play cannot win, for example 1 ♖b7 ♖a8! 2 ♖b1 (2 ♔c7 ♖d8!) ♖a6+ 3 ♔b7 ♖d6 and wins the pawn.

The following position makes use of this zugzwang.

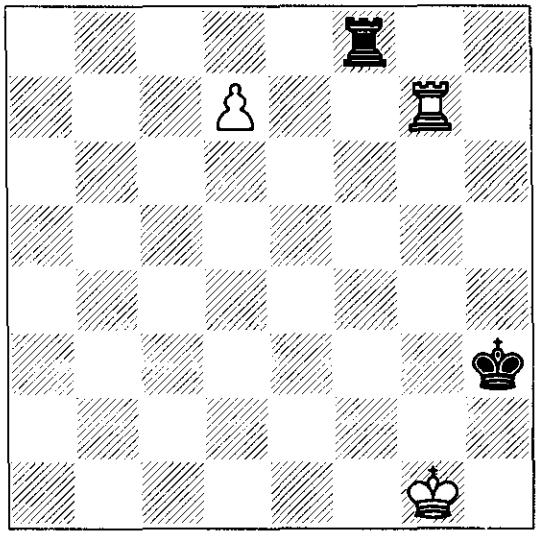
(**435**): Minev gave this is as a White to play and win position, but in fact White wins even if Black moves first. When White starts he can win by 1 ♖f8 (1 ♔f6? ♔d7! draws after 2 ♖h7 ♖e8, with the zugzwang of the previous diagram, or 2 ♖f8 ♖e8!) ♖a7 2 ♖f6+! ♔d7 (2...♔e5 3 ♔f7) 3 ♔f7 ♖a8 4 ♖f1 followed by ♖d1+.

With Black to play, 1...♖c8 (this meets the threat of 2 ♖f8 ♖a7 3 ♖f6+



435 +/–

*Minev, 1985*



436 =/–

*Original*

because Black can simply take the pawn) 2 ♔g6! (threat ♖f8, but not 2 ♔f6? ♔d7! as above) with three lines:

1) **2...♔d7** 3 ♖f8! ♖e8 4 ♖xe8! ♔xe8 5 ♔f6! reveals the point behind 2 ♔g6!.

2) **2...♖e8** 3 ♔f6! ♖h8 (3...♔d7 4 ♖h7! is diagram 434) 4 ♖h7 ♖e8 5 ♖h1 wins.

3) **2...♖g8+** 3 ♔f6 ♖e8 4 ♖g7! (a waiting move; 4 ♖h7? ♔d7! leaves White in zugzwang) ♔d7 5 ♖h7! and Black is in zugzwang.

The following position illustrates the other two new reciprocal zugzwangs with the d-pawn.

**(436):** Firstly suppose that Black is to play:

1) **1...♖d8** 2 ♔f2! ♔h4 3 ♔e3 ♔h5 4 ♔e4 ♔h6 5 ♖e7! ♔g6 6 ♔e5 and White is in time to head off Black's king.

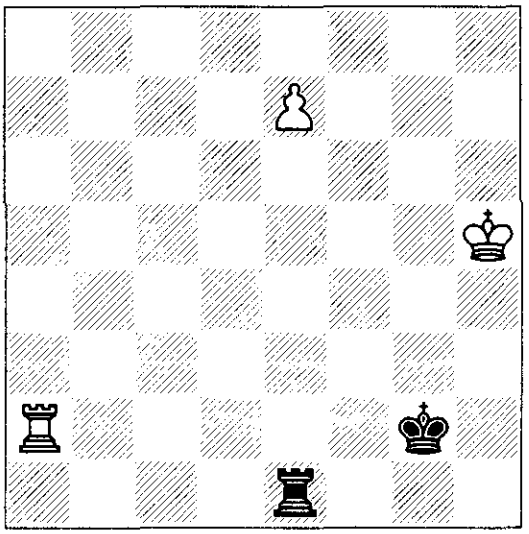
2) **1...♔h4** 2 ♔g2! (this is a second position of reciprocal zugzwang) ♔h5 (2...♖d8 3 ♔f3! wins as in line 1) 3 ♔g3! ♔h6 4 ♖e7! (4 ♖f7? ♖d8! 5 ♔f4 ♔g6! gives Black a free tempo) ♖d8 (Black has to move his rook in any case because White threatens ♖e8) 5 ♔f4! ♔g6 6 ♔e5! and wins.

With White to play, 1 ♖f7 (1 ♖e7 ♖d8! 2 ♔f2 ♔g4 and Black is too quick) ♖d8! (1...♖a8? 2 ♔f2! ♔g4 3 ♔e3! ♔g5 4 ♔e4 ♔g6 5 ♖e7! and Black must waste a tempo to deal with the threat of ♖e8) 2 ♔f2 ♔g4 3 ♔e3 ♔g5 and again Black gains a crucial tempo.

We finish with a couple of endgame studies which lead to the above positions.

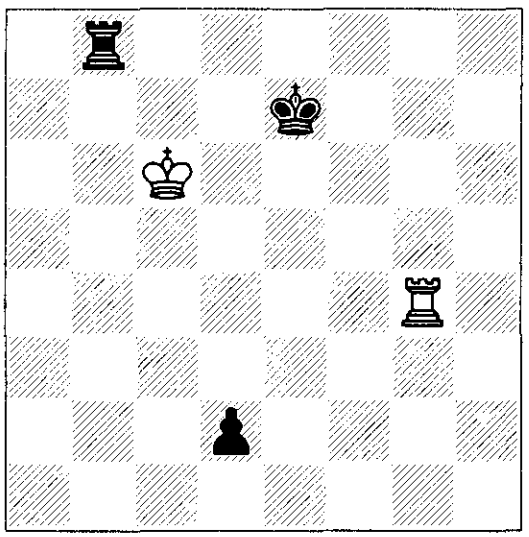
**(437):** 1...♔f3 (if the king moves to the first rank then 2 ♖a1 wins) 2 ♖a7! ♖e6 3 ♔g5! ♔e4 4 ♖b7 (or 4 ♖c7, but not 4 ♖d7? ♔e5! and White is in zugzwang) ♔d5 (after 4...♔e5 5 ♖d7! Black is in zugzwang) 5 ♔f5! ♖e1 6 ♔f6 ♖f1+ (6...♔d6 7 ♔f7) 7 ♔g7 ♖e1 8 ♔f8 and wins as in diagram 433.

**(438):** 1 ♖e4+! (not 1 ♖d4? ♖d8 nor 1 ♖g1? ♖c8+ and 2...♖c1) ♔f6 2 ♖d4! ♖b2 3 ♔d5! (3 ♖d5? ♔e6! 4 ♖d8 ♔e5



437 /–

*Keres, 1947 (end of study)*



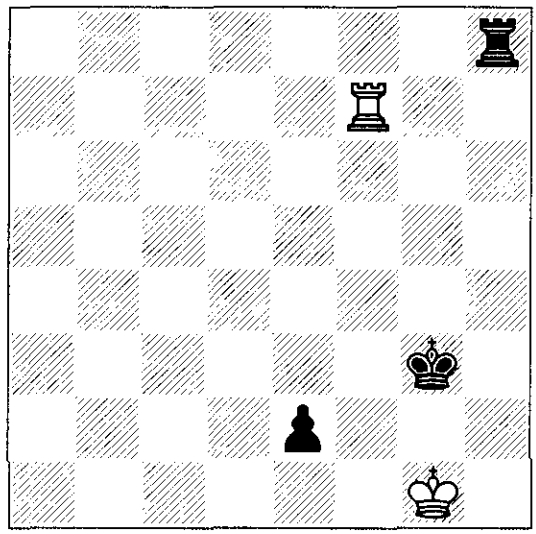
438 =/

*Kondratiev, 1988*
*Special Prize, Kopnin Jubilee Tourney*

5 ♔c5 ♔e4 6 ♔c4 ♔e3! 7 ♔c3 ♖a2! and 3 ♔d6? ♔f5! 4 ♔d5 ♖a2 win as in diagram 433) ♖c2 4 ♖d3! (4 ♖f4+? ♔g5 5 ♖d4 ♔f5! 6 ♔d6 ♖b2 is diagram 433 again) ♔f5 5 ♖f3+! (5 ♔d4? ♔f4! is zugzwang ) ♔g4 6 ♖d3! ♔f4 (6...♖c8 7 ♔e6! ♖e8+ 8 ♔d7! ♖e2 9 ♔d6 ♔f4 10 ♔d5 draws) 7 ♔d4! and now Black finds himself in zugzwang and must agree to a draw.

## 4.1.4: Other situations

We end with a few positions featuring unusual tactical points.



439 =/

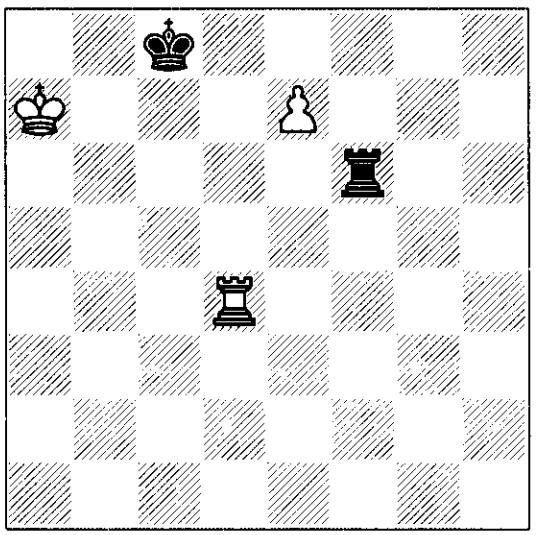
*Makletsov, 1983 (end of study)*
*2nd HM, Revista Romana de Sah (version)*

**(439):** White to play draws by 1 ♖f3+! (not 1 ♖g7+? ♔f3! 2 ♖f7+ ♔e3! 3 ♖e7+ ♔d2! 4 ♖d7+ ♔e1! 5 ♔g2 ♖g8+ with the Lucena win of diagram 429) ♔g4 2 ♖e3! winning the pawn.

**(440):** After 1...♖e6 (1...♖f7 2 ♖d8+ wins) 2 ♖d8+! ♔c7 White can only win by 3 e8♖! (3 e8♕? ♖a6+! 4 ♔xa6 stalemate).

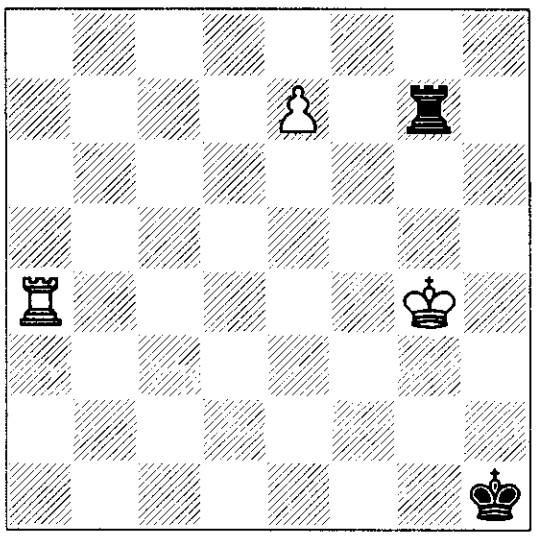
**(441):** White's pawn is attacked, hence he has to rely on mating threats: 1 ♔h3! ♖h7+ 2 ♔g3! ♖g7+ 3 ♔f2! ♖f7+ 4 ♖f4! (the key move) ♖xf4+ 5 ♔e3! ♖f1 6 ♔e2 and after 6...♔g2 7 e8♕, for example, White can win the black rook in 22 moves with optimal play.

We now move on to the case of the pawn on d6.



440 /–

*Kubbel, 1928 (end of study)*
*4th Prize, Magyar Sakkvilag*



441 +/

*Pogosiants, 1975/6*

## 4.2: Pawn on the sixth rank

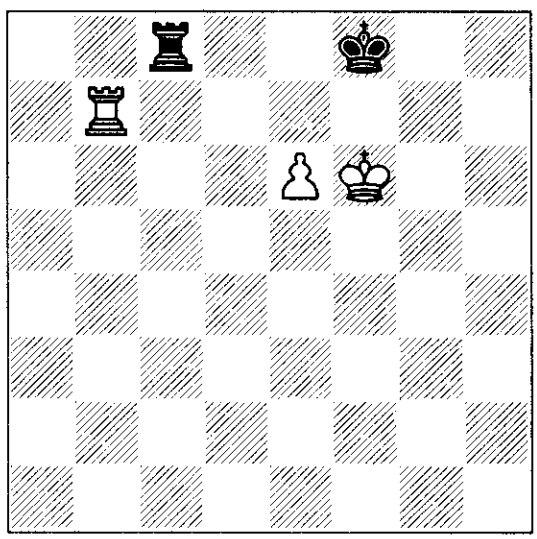
4.2.1: Black's king is in front of the pawn 266
4.2.2: White's king is in front of the pawn 268
4.2.3: White's rook is in front of the pawn 275
4.2.4: Other situations 278

### 4.2.1: Black's king is in front of the pawn

This case is very similar to that with the c-pawn. If Black's rook gets trapped on the back rank by White's mating threats then he loses.

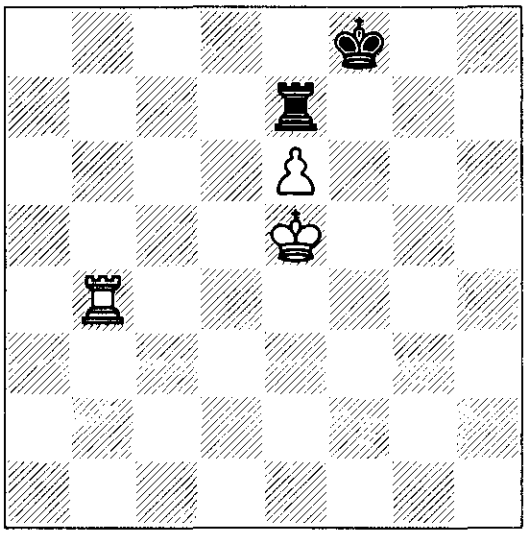
**(442):** This is a typical losing position in which the possibility of a back rank mate stops Black activating his rook. After 1...♖a8 White wins by 2 ♖b1 ♖c8 (2...♔g8 3 ♖g1+ ♔h7 4 e7 is the same) 3 ♖h1 ♔g8 4 ♖g1+ ♔h7 (4...♔f8 5 e7+) 5 e7 and wins.

Moving White's king to d6 results in a draw, even with White to play: 1 ♖f7+ (1 ♔e5 ♖c1 and Black can check from behind) ♔e8! 2 ♖h7 ♖d8+! 3 ♔e5 ♖d1 and again Black can check White's king away from f6.



442 +/–

Sometimes Black can save himself with a stalemate resource.



443 +/=

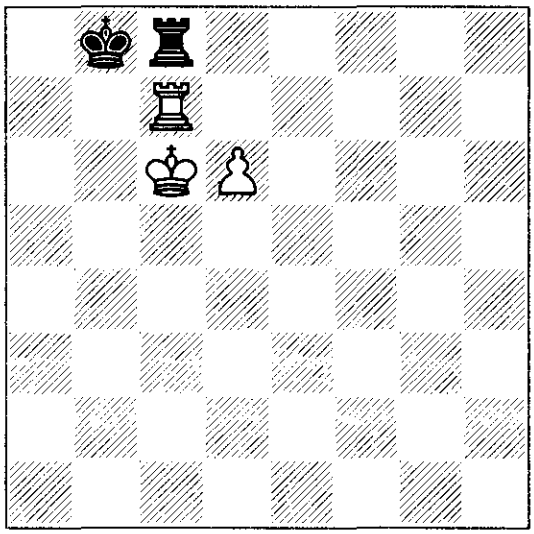
*Original*

**(443):** White to play wins by 1 ♔d6 (but not 1 ♔f6? ♖f7+! drawing) ♖e8 (or else 2 ♖b8+ and 3 e7) 2 ♖f4+ ♔g7 3 e7 ♖a8 4 ♖a4 ♖b8 5 ♔c7 ♖h8 6 ♔d7. With Black to play:

1) **1...♔g7?** 2 ♖a4 (White prevents Black's rook gaining the maximum checking distance; not 2 ♔d6? ♖a7! drawing) ♖b7 3 ♖a8! (3 ♔d6? ♖b6+! 4 ♔d7 ♖b7+ 5 ♔c6 ♖b1 6 ♖f4 ♖a1 and Black draws by increasing his checking distance) ♖b5+ (the threat was e7) 4 ♔d6! ♖b6+ 5 ♔d7 ♖b7+ 6 ♔c6 (if Black's rook had been on the a-file he would have drawn) ♖e7 7 ♔d6! followed by e7 and wins.

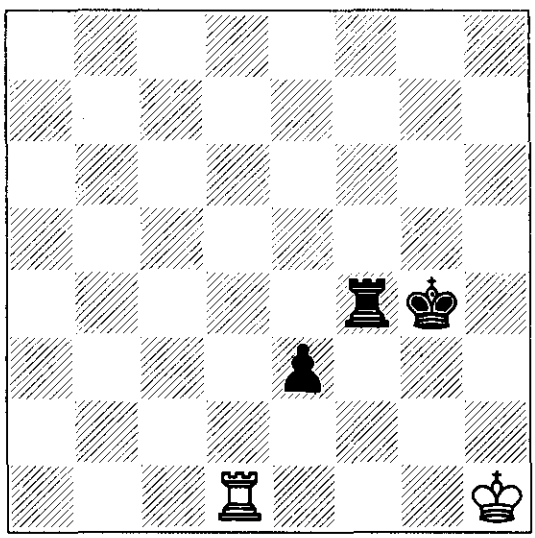
2) **1...♖a7!** (1...♖c7? 2 ♔d6! wins) 2 ♖f4+ (2 ♔f6 ♖f7+!, 2 ♖h4 ♖a1 and 2 ♔d6 ♖a6+ are clear draws) ♔e8 3 ♔f6 ♖a1 and as soon as White's rook moves off the f-file Black starts checking.

The following reciprocal zugzwang is worth knowing because it can easily arise when Black's king is not exactly in front of the pawn.



444 =/–

**(444):** Black to play loses after 1...♖h8 2 ♖b7+ ♔a8 3 ♖b5 ♖c8+ 4 ♔d7 ♖c1 (4...♖h8 5 ♔c7) 5 ♔d8 ♔a7 6 d7 with a Lucena win. White to play can only try 1 ♔d7 (1 ♔b6 is met by 1...♖xc7!) ♖h8! (checking distance again; 1...♖g8? loses after 2 ♖c1 ♖g7+ 3 ♔e8 ♖g8+ 4 ♔f7 ♖h8 5 d7! ♖h7+ 6 ♔e6 ♖h6+ 7 ♔f5 ♖h8 8 ♔f6 ♔b7 9 ♖h1) 2 ♖c1 ♖h7+! 3 ♔e8 (3 ♔c6 ♔c8! 4 ♖g1 ♖c7+!) ♖h8+ 4 ♔f7 ♖h7+, but he cannot make progress.



445 –/

*Gurgenidze, 1987*

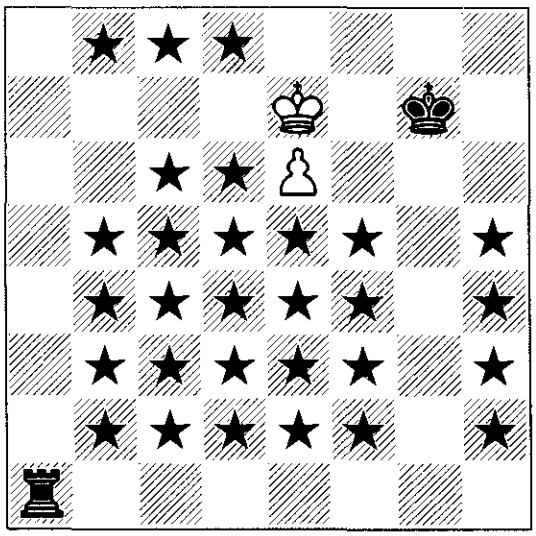
**(445):** Gurgenidze's White to play and draw study is based on the zugzwang of the previous diagram, but the study is unsound. After 1 ♔g2 (if 1 ♔g1, then 1...e2 2 ♖a1 ♔g3 followed by ...♖f3-d3-d1 wins for Black, and 1 ♖e1 ♔f3 2 ♖f1+ ♔g3 3 ♖g1+ ♔f2 4 ♖g2+ ♔f3 followed by ...e2 is no better) ♖f2+ 2 ♔g1 ♖a2 (this is the refutation; 2...♔f3? 3 ♖f1! is the previous diagram) 3 ♖e1 (White cannot avoid having his rook trapped on the back rank; 3 ♖b1 ♔g3 is similar to the main line while 3 ♖d8 ♖a1+ 4 ♔g2 e2! loses at once) ♔f3 4 ♖f1+ ♔g3 (or 4...♖f2) 5 ♖b1 ♖a3 (the best winning method, as the alternative 5...♖g2+ 6 ♔h1 e2 7 ♖b3+ ♔f4 8 ♖b4+ ♔e3 9 ♖b3+ ♔d2 10 ♖b2+ ♔c1 11 ♔xg2 e1♕ requires Black to play ♕ v ♖; in this case 23 moves of accurate play suffice to win the rook) 6 ♔f1 (or else ...e2 and ...♖d3-d1) ♔f3! and wins as in diagram 442.

### 4.2.2: White's king is in front of the pawn

This case is both complicated and of great practical importance. There are two possibilities according to whether Black's king is on the short side or the long side of the pawn. We will consider them separately, although there is some overlap between the cases. It is hard to ascertain the origins of the positions in this section, as many of them have been analysed and occasionally slightly modified by various authors and players over the years. Perhaps the fairest is to give a collective mention to the work of Tarrasch and Grigoriev, and leave it at that.

When Black's king is on the short side, his rook is on the long side of White's king and so has greater checking distance. Suppose, for example, that White's pawn is on e6, his king on e7 and Black's king on g7. Occupation of the a-file is crucial. If White can gain control of the a-file himself Black will have to check from the b-file instead; sometimes this draws but on other occasions the rook has insufficient space and Black cannot save the game.

First of all, we will cover the case in which Black's king is on the optimum square g7.



446 +/

**(446):** This is the basic position. White to play wins if his rook is on one of the marked squares. Black to play draws wherever White's rook starts (except on the g-file!). Much of this diagram is easy to understand, because White wins if he can check on

the g-file and play 2 ♔e8, heading for the Lucena position. The only tricky cases are the squares on the sixth, seventh and eighth ranks. We will consider these special cases: W♖c6, d6, b6, c7, d7, d8.

**W♖c6:** 1 ♔d8! (1 ♔e8? ♖a8+! 2 ♔d7 ♔f6 draws) ♖d1+ (1...♖a8+ 2 ♖c8! followed by e7 wins) 2 ♔e8 ♖a1 3 ♖c8 (not 3 e7? ♖a8+! 4 ♔d7 ♔f7!) ♖d1 (Black cannot prevent e7) 4 e7 ♖d2 5 ♖d8 (or 5 ♖c4, with the Lucena win) followed by ♔d7 and wins.

**W♖d6:** 1 ♔e8! (1 ♔d8? ♖a8+! 2 ♔d7 ♔f6 draws) ♖a8+ (1...♔f6 2 e7+! ♔g7 3 ♔d7 wins) 2 ♖d8! ♖a6 3 e7 ♖a7 4 ♖c8 (threat ♔d8) ♖a1 5 ♔d8 ♖d1+ 6 ♔c7 and wins.

**W♖b6:** White cannot win this position: 1 ♖d6 (1 ♔e8 ♖a8+! 2 ♔d7 ♔f6) ♖a8! (not 1...♖a7+? 2 ♔e8! as above) 2 ♖d8 (2 ♔d7 ♔f6 draws, but not 2...♔f8? – see diagram 452) ♖a7+ 3 ♖d7 (3 ♔e8 ♔f6!) ♖a8 (not 3...♖a6? 4 ♔e8+! ♔f6 5 e7! and 5...♔e6 loses to 6 ♔f8! because Black's rook cannot check on the f-file) 4 ♖d6 ♔g6! (the only move to draw; 4...♖b8 5 ♖d8! ♖b7+ 6 ♔d6 ♖b6+ 7 ♔d7 ♖b7+ 8 ♔c6 wins) 5 ♖d1 ♖a7+ 6 ♔d8 ♔f6 7 e7 ♖a8+! draws.

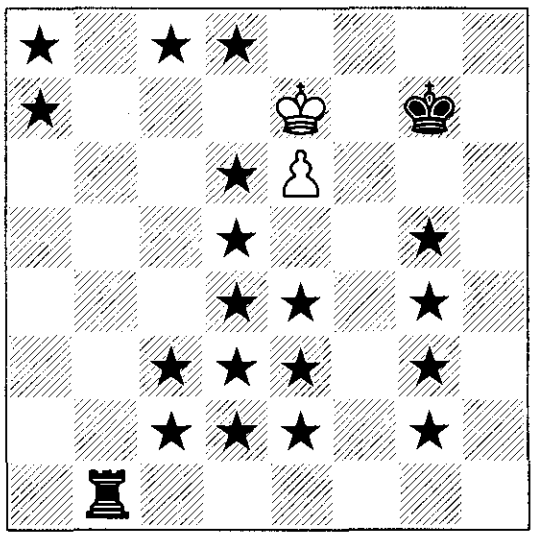
A useful point to remember is that if White's rook is on the sixth rank (b6, c6 or d6) and Black's rook is on a8 then the position is a draw whether Black's king is on g6 or g7. This simple rule can save a lot of work!

**W♖c7:** This is also drawn: 1 ♔d7 (1 ♔d8+ ♔f6! 2 e7 ♖a8+! 3 ♔d7 ♔f7!, 1 ♔d6+ ♔f6 and 1 ♖d7 ♖a8 are also drawn) ♖a8! 2 ♖c8 ♖a7+! 3 ♔d6 ♖a6+! 4 ♖c6 ♖a8 5 ♖c7+ ♔f6 (or 5...♔f8) 6 ♖f7+ ♔g6! 7 ♖f1 ♖a6+ draws.

**W♖d7:** The rook is no better on d7: 1 ♔e8+ (1 ♖b7 ♖a8, 1 ♔d8+ ♔f6 and 1 ♔d6+ ♔f6 offer White no winning chances) ♔f6! 2 e7 ♔e6! 3 ♔f8 ♖f1+! draws.

**W♖d8:** 1 ♔e8! ♔f6 (otherwise White wins just as in the position with W♖d6) 2 e7! ♖a7 3 ♖d6+ ♔g7 4 ♖e6 and the king emerges next move.

Black's situation is much more precarious when his rook stands on the b-file.



447 /–

**(447):** White to play wins wherever his rook starts, except for the miserable squares f6 and h6. White wins even with Black to play if his rook is on a square marked with a star.

First of all we consider White to play. This case is not very interesting. White wins if he can check on the g-file, and if White's rook is on a8, c8 or d8 he wins easily by 1 ♔e8, just as in the previous diagram. We will show

that White wins even with Black to move if his rook is on a8 or d6, so that White to move wins if he can play 1 ♖a8 or 1 ♖d6. This only leaves W♖c7, when White to play wins by 1 ♔d7 ♖b8 (1...♖d1+ 2 ♔e8+! followed by e7) 2 ♖c8 ♖b7+ 3 ♔c6 ♖b1 (3...♖a7 4 ♖c7+! or 3...♖e7 4 ♔d6!) 4 e7.

Now we take Black to play. This is much more interesting and we consider the following special cases: W♖a2, a8, a7, c2, c4, c7, d6, d2, d5, d7, e4, e5 and f2.

**W♖a2:** Although Black's rook is on the inferior b-file he can still draw. After 1...♖b7+! 2 ♔d6 (2 ♔d8 ♖b8+! 3 ♔c7 ♖b1 is similar) ♖b6+! (2...♖b1 3 e7 ♖d1+ 4 ♔e6! wins by hiding on e8) 3 ♔d7 ♖b7+! 4 ♔c6 ♖b1 (but not 4...♖b8? 5 ♖a7+!, transposing into the W♖a7 section below) 5 ♖f2 (5 ♖e2 ♔f8!) ♖a1 (taking the chance to increase his checking distance) 6 e7 ♖a6+! drawing as in diagram 430.

**W♖a8:** White wins by 1...♖b7+ (after 1...♖e1 2 ♖a2 White can check Black's king away, while 1...♖b2 2 ♔e8 ♖h2 loses to 3 ♖a7+ ♔g6 4 e7 ♖d2 5 ♔f8 ♖f2+ 6 ♔g8 ♖e2 7 ♖a6+ and 8 ♔f7) 2 ♔d6! ♖b6+ (2...♔f6 3 ♖f8+!) 3 ♔d7 ♖b7+ 4 ♔c6 ♖e7 5 ♔d6! and Black is helpless.

**W♖a7:** The threat is 1 ♖a8 winning as above, so Black's best defence is 1...♖b8 *(D)* and now:

1) **2 ♔d7?** ♔f6 (the key point is that this position is reciprocal zugzwang) 3 ♖c7 (3 ♖a1 ♖b7+! 4 ♔d6 ♖b6+! 5 ♔d7 ♖b7+! draws, as does 3 e7 ♔f7! 4 ♖a1 ♖b7+!) ♖a8! (Black is in no danger once he occupies the a-file) 4 ♖b7 ♔g7 5 ♔e7 ♔g6 with a draw as in diagram 446.

2) **2 ♔d6+!** (this winning position occurs time and time again in the analysis of such endings) and now:

2a) **2...♔f8** 3 ♔d7! (attaining a second position of reciprocal zugzwang; with White to play the analysis is similar to line 1 above) ♖e8 (3...♔g7 4 ♔e7 is line 2c below) 4 ♖a1 ♖e7+ 5 ♔d6! wins as in diagram 443.

2b) **2...♔g8** 3 ♔c7 ♖e8 4 ♔d7 ♖b8 (4...♔f8 5 ♖a1 as in line 2a) 5 ♖a1 ♖b7+ 6 ♔c6 ♖b8 (6...♖e7 7 ♔d6) 7 ♔c7 ♖e8 (7...♖b2 8 ♖a8+) 8 ♔d7 ♖b8 9 ♖g1+ ♔h7 10 e7 wins.

2c) **2...♔f6** 3 ♔d7! (now Black is to move in the reciprocal zugzwang) ♔g7 (3...♔g6 4 ♖a1 ♖b7+ 5 ♔d8 transposes to the main line) 4 ♔e7! (after this Black must weaken his position) ♔g6 (4...♖b1 5 ♖a8 wins as in the case of W♖a8 above, while 4...♔g8 5 ♖a1 ♖b7+ 6 ♔d8 ♖b8+ 7 ♔c7 ♖e8 8 ♔d7 wins) 5 ♖a1 ♖b7+ 6 ♔d8 ♖b8+ (6...♔f6 7 e7! ♖b8+ 8 ♔c7 ♖e8 9 ♔d6! wins) 7 ♔c7 ♖b2 (7...♖e8 8 ♔d7 ♖b8 9 e7 ♖b7+ 10 ♔d8 ♖b8+ 11 ♔c7 wins) 8 ♖e1 ♖c2+ 9 ♔d7 ♖d2+ 10 ♔e8 followed by e7 wins.

**W♖c2:** White wins after 1...♖b7+ 2 ♔d8 ♔f6 (2...♖b1 3 e7 and 2...♖b8+ 3 ♖c8 ♖b1 4 e7 are hopeless) 3 e7! ♖b8+ 4 ♔d7 ♖b7+ 5 ♔d6 ♖b6+ 6 ♔c7 ♖e6 7 ♔d8! ♖d6+ 8 ♔e8! ♔g7 9 ♖g2+ followed by ♔f7.

**W♖c4:** Now Black can draw by 1...♖b7+! 2 ♔d6 (or 2 ♔d8 ♔f6! and after 3 e7 ♖xe7 White's rook is too close to Black's king, or 3 ♖e4 ♖b8+! 4 ♔d7 ♖b7+! 5 ♔c6 ♖a7 drawing)

♖b6+! 3 ♖c6 (3 ♔d7 ♔f6! draws after 4 ♖f4+ ♔e5! 5 e7 ♖b7+! or 4 ♖c1 ♖b7+) ♖b8! (3...♖b1? 4 ♔d7 ♖b7+ 5 ♖c7! ♖b8 6 ♖c8 ♖b7+ 7 ♔c6 wins) 4 ♖c7+ (4 ♔d7 ♖a8 draws) ♔f8! (not 4...♔f6? 5 ♖f7+! ♔g6 6 ♖a7! ♔f6 7 ♔d7! winning as in W♖a7 above) with a draw by diagram 442.

**W♖c7:** Black draws by 1...♖a1! transposing to diagram 446.

**W♖d6:** White wins easily after 1...♖b8 (or 1...♖a1 2 ♔e8! as in diagram 446) 2 ♖d8 ♖b1 3 ♔e8 ♖a1 4 e7 ♖a7 5 ♖c8.

**W♖d2:** White wins after 1...♖b7+ 2 ♖d7! when 2...♖b1 3 ♖d6 and 2...♖b8 3 ♖d8 transpose to the W♖d6 analysis.

**W♖d5:** White wins by 1...♔g6 (if 1...♖b7+, then 2 ♖d7! transposes to the W♖d2 analysis) 2 ♖d2 ♖b7+ 3 ♖d7 ♖b8 (3...♖b6 4 ♖a7 ♔f5 5 ♖a5+! ♔g6 6 ♖a1 ♖b7+ 7 ♔d8 ♖b8+ 8 ♔c7 ♖b2 9 ♖e1 ♖c2+ 10 ♔d7 ♖d2+ 11 ♔e8 followed by e7 with a Lucena win) 4 ♖a7! ♔g7 5 ♔d6+! as in the W♖a7 analysis.

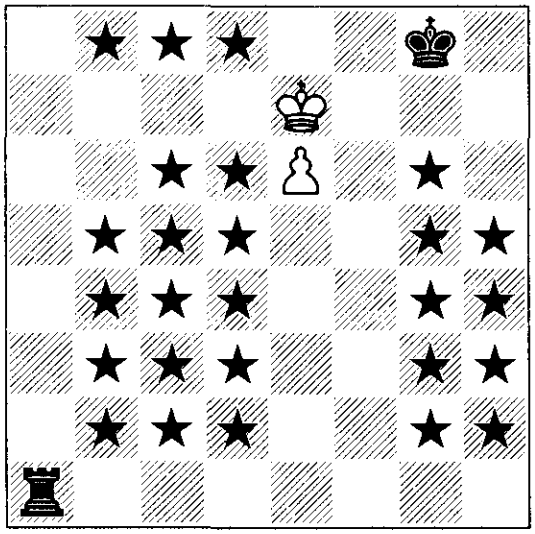
**W♖d7:** Black draws by 1...♖a1! transposing to diagram 446.

**W♖e4:** White wins after 1...♖b7+ 2 ♔d8 ♖b8+ (2...♔f6 3 e7! wins) 3 ♔d7 (not 3 ♔c7? ♖a8!) ♖b7+ 4 ♔c8 ♖e7 5 ♔d8! ♖a7 6 e7! ♖a8+ 7 ♔d7! ♖a7+ 8 ♔c6 promoting the pawn.

**W♖e5:** Black draws by 1...♖b7+! 2 ♔d8 (2 ♔d6 ♔f8!) ♖b8+ 3 ♔d7 ♔f6 4 ♖e1 ♖b7+! 5 ♔c6 ♖a7.

**W♖f2:** Drawn by 1...♖b7+! 2 ♔d6 ♖a7 and since e7 is not a threat, Black has time to increase his checking distance.

Now we must deal with the inferior Black king positions on g8 and g6. The following diagram gives the results with Black's king on g8.



448 /–

**(448):** White wins with Black to play if his rook is on any of the marked squares. When White's rook can reach both the g-file and eighth rank then Black loses, so the interesting cases arise when White's rook is on the sixth, seventh and eighth ranks. But in this case Black's best defence is to play ...♔g7, so the results are identical to those in diagram 446. In fact the only difference between this diagram and diagram 446 is that here White only draws with the rook on the e- and f-files.

We consider the following special cases: W♖b2, e2, f2, h2.

**W♖b2:** White wins by 1...♖a7+ (Black has no time for ...♔g7) 2 ♔f6! ♖a6 3 ♖b8+ ♔h7 4 ♔f7 ♖a1 5 e7.

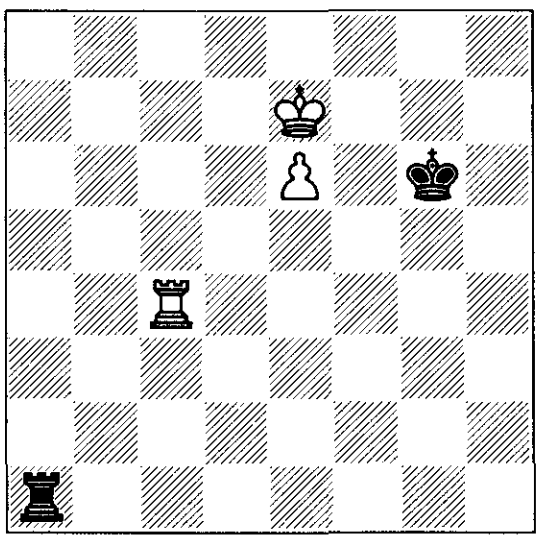
**W♖e2:** White cannot win because his rook is unable to move to the eighth rank. Black draws using the

stalemate trick 1...♖a7+! 2 ♔f6 ♔f8! 3 ♖b2 ♖f7+!.

**W♖f2:** 1...♖a7+! 2 ♔f6 ♔f8! is the same.

**W♖h2:** In this case White wins after 1...♖a7+ 2 ♔f6! ♖b7 (Black cannot play 2...♔f8) 3 ♖d2 (threat 4 ♖d8+) ♖b6 4 ♖d8+ ♔h7 5 ♔f7 and 6 e7.

Finally we consider the case in which Black's king is on g6. Firstly, suppose that Black's rook is on the a-file. The results are very similar to those for diagram 446, but there are some differences which follow naturally from Black's king position, for example having White's rook on b5, c5, d5 or e5 is now a draw because there is no check on g5, while having the rook on e8 or f8 wins because of the check on g8. The only other difference arises when White's rook starts on the fourth rank.



449 =/=

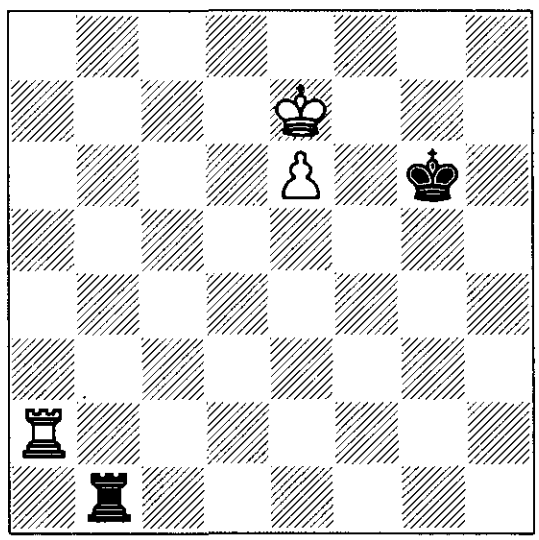
*Original*

**(449):** Although White has a check on g4 he cannot win when his rook is on c4. The same is true if his rook starts on b4, e4 or f4, but with his rook on d4 White wins. Taking the diagram position first: 1 ♔d8 (1 ♖g4+ ♔f5! 2 ♖d4 ♔e5! 3 ♖d2 ♖a7+! 4 ♖d7 ♖a6! wins the pawn) ♔f6! (1...♖a8+? 2 ♖c8! and 1...♖d1+? 2 ♔e8! win for White) 2 e7 ♖a8+! leads to a draw.

With the rook on d4 White to play wins by 1 ♔e8! ♔f6 (1...♖a8+ 2 ♖d8! ♖a7 3 e7 wins) 2 e7! ♔e6 (2...♖a8+ 3 ♖d8! ♖a7 4 ♖d6+! also wins) 3 ♖e4+! ♔d5 4 ♖e2 followed by a king move, promoting the pawn.

However, if the rook starts on d5 the position is again drawn because 1 ♔e8 ♔f6! 2 e7 ♔e6! 3 ♖d2 ♖a8+! 4 ♖d8 ♖a7! rounds up the pawn.

We now look at a couple of positions with Black's king on g6 and his rook on the b-file.

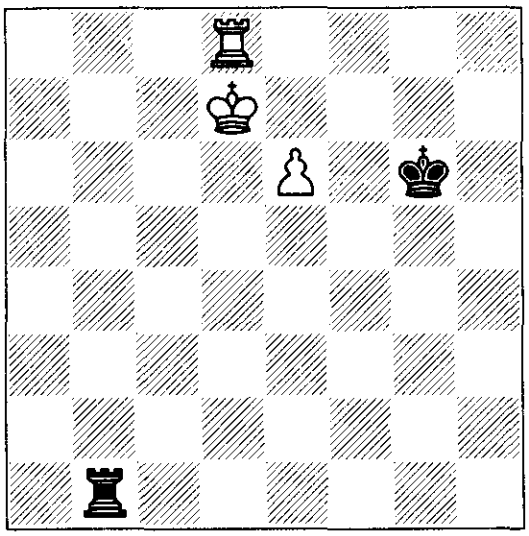


450 +/−

**(450):** As usual, White to play wins by 1 ♖g2+, so we take Black to move. This is a draw with Black's king on g7, but here he loses after 1...♖b7+ 2 ♔d8 ♖b8+ 3 ♔c7 ♖b1 4 ♖e2 ♖c1+ (when the king is on g7 Black can continue

...♔f8) 5 ♔d7 ♖d1+ 6 ♔e8 followed by e7 with a Lucena win.

Now move White's rook to a4. In this case Black draws by 1...♖b7+! 2 ♔d8 (2 ♔d6 ♖b6+! 3 ♔d7 ♔f6! draws) ♔f6! just as in diagram 447 with W♖c4.



451 +/–

*Grigoriev, 1937*

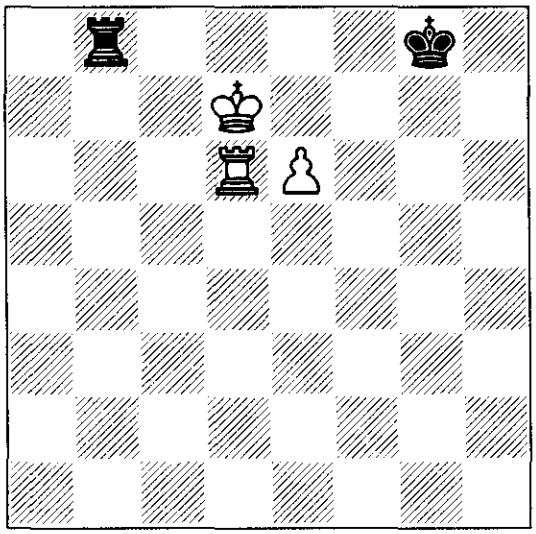
(**451**): White to play wins by 1 e7, so take Black to play. The analysis runs 1...♖b7+ 2 ♔d6! (2 ♔c6? ♖a7! draws) ♖b6+ 3 ♔e5! (3 ♔e7? ♖a6! and 3 ♔d5? ♔f6! draw) ♖b5+ (3...♖b7 4 ♖g8+ cuts off Black's king) 4 ♖d5! with three variations:

1) **4...♖b7** 5 ♖a5 (threat 6 ♖a8 ♔g7 7 ♔d6) ♖b8 6 ♖a1 ♔g7 (6...♖b5+ 7 ♔d6! ♖b6+ 8 ♔d7 ♖b7+ 9 ♔c6 wins as in the previous diagram) 7 ♖a7+ ♔g6 8 ♔d6 ♔f6 9 ♔d7! is the decisive reciprocal zugzwang of diagram 447 with W♖a7 (line 2a).

2) **4...♖b8** 5 ♖a5! (the only winning move; 5 ♖d1? ♔g7! draws after 6 ♖d7+ ♔g6! 7 ♖a7 ♖b5+! 8 ♔d6 ♔f6! 9 ♖f7+ ♔g6 10 ♖f8 ♖b6+! 11 ♔d5 ♖b7! 12 ♔c6 ♖a7! or 6 ♖g1+ ♔f8! 7 ♔f6 ♖b7! 8 ♖a1 ♖f7+!) ♔g7 (5...♖b1 6 ♖a8 wins as in line 1) 6 ♖a7+! transposing to line 1.

3) **4...♖b1** 5 ♖d2 ♖b5+ (5...♔g7 6 ♖d8! ♖e1+ 7 ♔d6! ♖d1+ 8 ♔c7 ♖e1 9 ♔d7 ♖d1+ 10 ♔e8 wins) 6 ♔d6 ♖b6+ 7 ♔e7 ♖b7+ 8 ♖d7 ♖b8 9 ♖a7 ♔g7 10 ♔d6+! and we are back to diagram 447 with W♖a7.

We finish with a position featuring some tactical points.



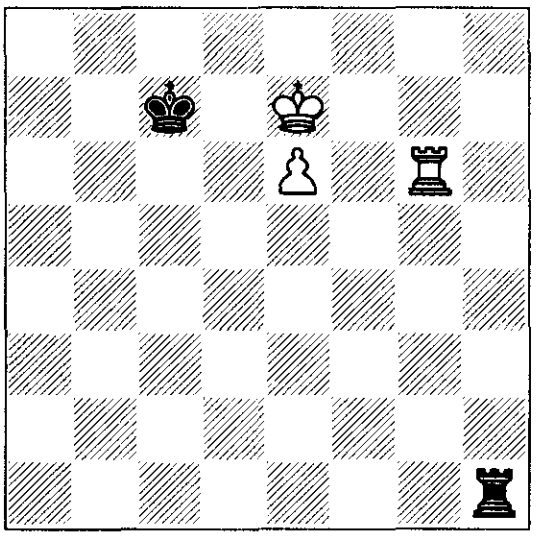
452 +/–

*Original*

(**452**): White to play wins by 1 ♖d1 ♖b7+ 2 ♔c6 ♖b8 3 e7, so we take Black to play: 1...♔f8 (1...♔g7 2 ♖d1 ♖b7+ 3 ♔d8 ♖b8+ 4 ♔e7 wins as in diagram 447 with W♖d2, while 1...♖a8 2 ♖d1 ♖a7+ 3 ♔e8! ♖a8+ 4 ♖d8 ♖a7 5 e7 presents no problems) 2 ♖b6! (2 ♖a6? ♖b7+ 3 ♔d6 ♖b8! draws) ♖a8 (2...♖e8 3 ♖b1 wins) 3 ♖a6! (White uses tactics to transfer his rook to the a-file with gain of time; 3 ♖b7 ♔g7 draws) ♖b8 4 ♖a7! and White has reached the reciprocal zugzwang of

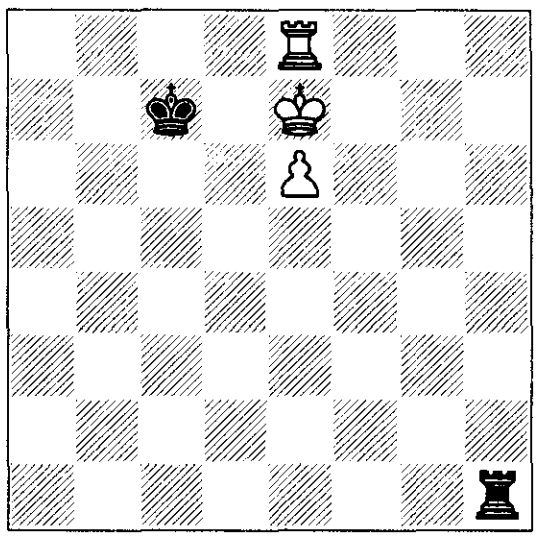
line 2a in diagram 447 (W♖a7) with Black to move.

Now we must consider the case in which Black's king is on the long side of the pawn. This is a much simpler situation because Black almost always loses, except in especially favourable positions.



453 +/–

**(453):** In this diagram Black's rook has the maximum possible checking distance and White's rook is badly placed, but Black still loses even if he is to play. With White to move 1 ♖f6 ♖h2 (1...♖h7+ 2 ♔e8! ♖h8+ is the same) 2 ♔e8 ♖h8+ 3 ♖f8 followed by e7 wins. With Black to play, 1...♖h7+ 2 ♔e8! (not 2 ♔f6? ♔d6! nor 2 ♔f8? ♔d8! 3 ♖f6 ♖h8+! 4 ♔g7 ♔e7, with a draw in both cases; note that 3...♖e7? 4 ♖h6! is bad in the second line – see diagram 455 below) ♖h8+ 3 ♔f7! ♖h7+ 4 ♖g7! ♖h8 (4...♖h1 5 e7) 5 ♖g1 ♖h7+ 6 ♔f8 ♖h8+ 7 ♖g8 (Black can never exchange rooks because White is too close to the pawn) ♖h1 8 e7 ♖f1+ 9 ♔e8 (the only problem with being on the short side is that White cannot simply retreat his king, but it makes no difference to the result) ♖h1 10 ♖g4 (the Lucena win again) ♖f1 11 ♖c4+ ♔b7 12 ♔d7 with the usual win.



454 +/=

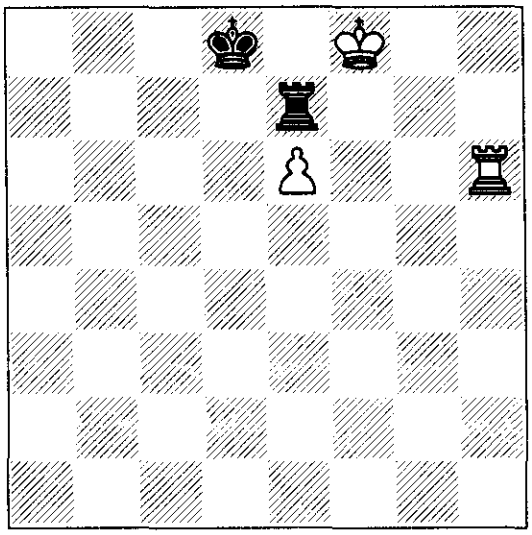
*Tarrasch, 1906*

**(454):** When White's rook is on a really bad square Black can sometimes draw. White to play wins by 1 ♖f8 ♖h7+ 2 ♔f6 ♖h6+ 3 ♔f7 ♖h7+ 4 ♔g6 ♖e7 5 ♔f6, so we take Black to play: 1...♖h7+! 2 ♔f6 ♖h6+! 3 ♔f7 ♖h7+! 4 ♔g6 ♖h1 draws because as soon as the rook moves away from e8 Black replies ...♔d6.

Even with the rook on e8, White still wins if Black's rook starts anywhere else on the first rank. For example, with the rook on g1, 1...♖g7+ 2 ♔f6 ♖g1 3 ♖f8 ♖f1+ 4 ♔e7 ♖h1 5 ♔e8 followed by e7 wins as in diagram 453.

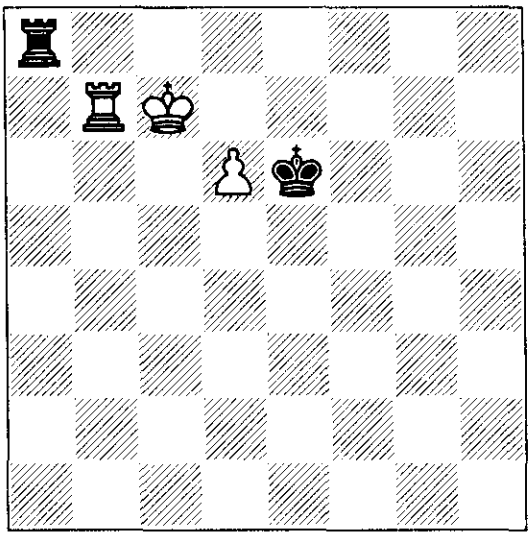
We finish with some reciprocal zugzwang positions.

**(455):** This reciprocal zugzwang is quite important. With Black to play



455 =/–

1...♖e8+ 2 ♔f7! ♖e7+ 3 ♔f6! ♖e8 4 ♔e5! ♔e7 (4...♖g8 5 ♔d6! wins) 5 ♖h7+! wins for White after 5...♔f8 6 ♔f6 or 5...♔d8 6 ♔d6. With White to play, 1 ♖g6 ♖h7! (not 1...♖e8+? 2 ♔f7! ♖e7+ 3 ♔f6! ♖e8 4 ♔e5! ♔e7 5 ♖g7+! ♔f8 6 ♖f7+ ♔g8 7 ♖f4 ♔g7 8 ♖g4+ ♔h6 9 ♔d6 ♖d8+ 10 ♔c7 followed by e7 and wins) 2 ♖g1 ♖h8+! 3 ♔f7 ♖h7+! 4 ♔f6 ♖h6+ and Black draws.



456 =/–

*Original*

**(456):** This position is directly analogous to that in diagram 447 with W♖a7, although it has much less importance because it cannot arise with best play from a position with White's king on d7 (e.g. with W♔d7 v B♔f7 in diagram 456, White to play wins by 1 ♖c7 without the need for a triangulation manoeuvre). With Black to play 1...♖a1 (1...♔f7 and 1...♔f6 are both met by 2 ♖b1 winning as in diagram 453) 2 d7! ♖c1+ 3 ♔d8! ♔f7 4 ♖b4 is the Lucena position. White to play can only draw after 1 d7 (1 ♖b1 ♖a7+!) ♔e7! 2 ♖b1 ♖a7+! 3 ♔c8 ♖a8+!.

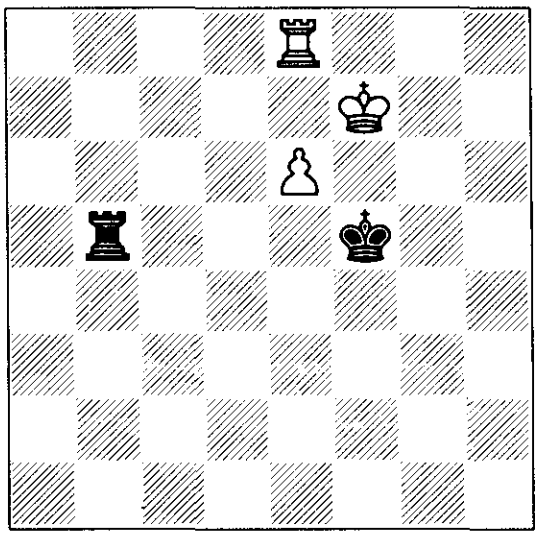
It is worth mentioning that transferring Black's king from e6 to e8 in diagram 456 preserves the reciprocal zugzwang.

### 4.2.3: White's rook is in front of the pawn

Some of the analysis in this section dates back to Horwitz and Kling (1851). As usual, there is a distinction between the short side and the long side.

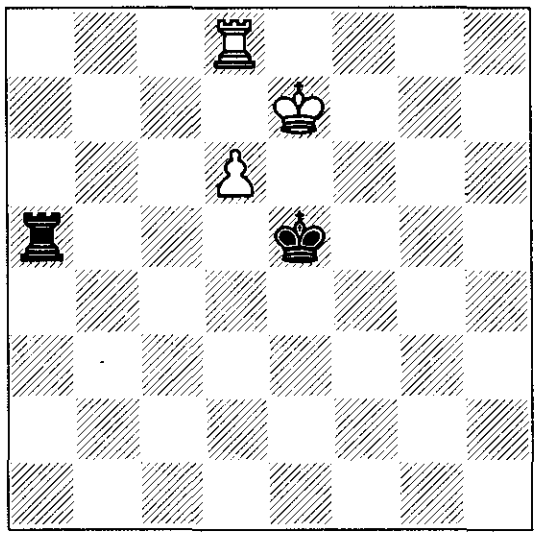
**(457):** White to play wins by 1 e7. Black to play draws after 1...♖b6! 2 e7 (2 ♖h8 ♖xe6! draws – alert readers will already realize the difference when Black's king is on the long side) ♖f6+! 3 ♔g7 ♖g6+! (3...♔e6? 4 ♖f8!) 4 ♔h7 ♔f6! 5 ♖a8 ♖g7+! winning the white pawn.

**(458):** The difference is that after 1...♖a6 (otherwise White plays 2 d7) 2 ♖h8, White's rook is far enough away from Black's king to win in the line 2...♖xd6 3 ♖h5+!.



457 +/=

*Horwitz and Kling, 1851*

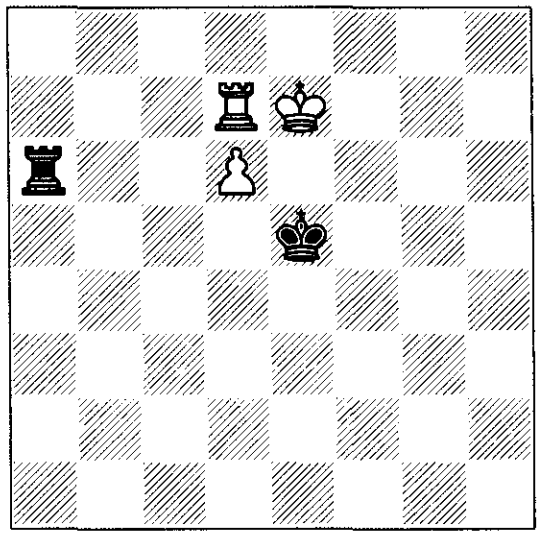


458 +/–

*Horwitz and Kling, 1851*

If Black's rook starts on a4 he draws by switching to the other side: 1...♖h4 2 ♔d7 (2 d7 ♖h7+! draws) ♔d5! (not 2...♖a4? 3 ♖h8! winning after 3...♖a7+ 4 ♔c6! ♖a6+ 5 ♔c7! ♖a7+ 6 ♔b6! ♖d7 7 ♔c5! ♔e6 8 ♖h6+) 3 ♖e8 (or else ...♖h7+) ♖h6 and wins the pawn.

**(459):** A small modification of the position gives a reciprocal zugzwang. Black to play: 1...♔d5 (1...♖b6 2 ♖d8! threatens 3 ♖h8, so Black has to play



459 =/–

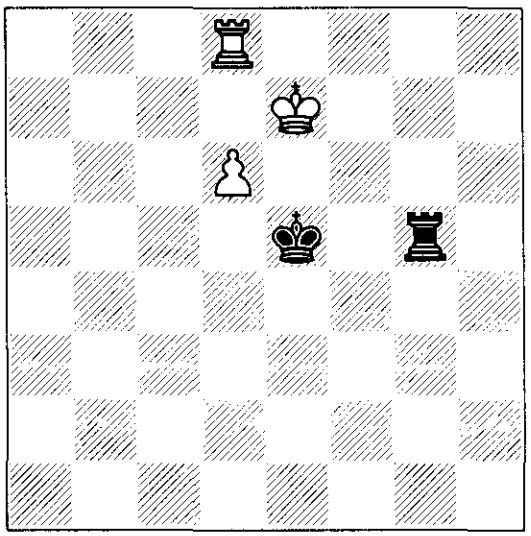
*Chéron, 1944*
*Journal de Genève*

2...♔d5 transposing to the next note) 2 ♖d8! (this is a second position of reciprocal zugzwang) ♖a1 (2...♖b6 3 ♖a8! wins at once) 3 ♖h8 ♖e1+ 4 ♔d7! (threat ♖h5+) ♖e5 5 ♔c7 followed by d7 wins for White.

With White to play, 1 ♖d8 ♔d5! 2 d7 (there are no other moves) ♖e6+! 3 ♔f7 (3 ♔f8 ♔d6) ♖d6! gives a reciprocal zugzwang with White to move.

**(460):** It turns out that Black's rook is badly placed and White can win by 1 ♖e8 (1 ♔d7 also wins) ♖g7+ (1...♔d5 2 ♔f6! followed by 3 d7) 2 ♔f8+! ♔f6 3 ♖e7! ♖g1 4 ♖h7 (not 4 d7? ♖g8+!, but 4 ♖f7+ ♔e6 5 d7! ♖h1 6 ♖e7+! ♔f6 7 ♖h7! also wins, although White has to play ♕ v ♖) ♖a1 5 ♖h6+! ♔g5 6 ♖e6 (6 d7 wins, but again this involves ♕ v ♖) ♖a7 7 ♔e8 and the d-pawn runs through.

However, if Black's rook starts on any other square on the g-file (except g8) then White to play can only draw, for example take B♖g4: 1 ♖e8 (for 1

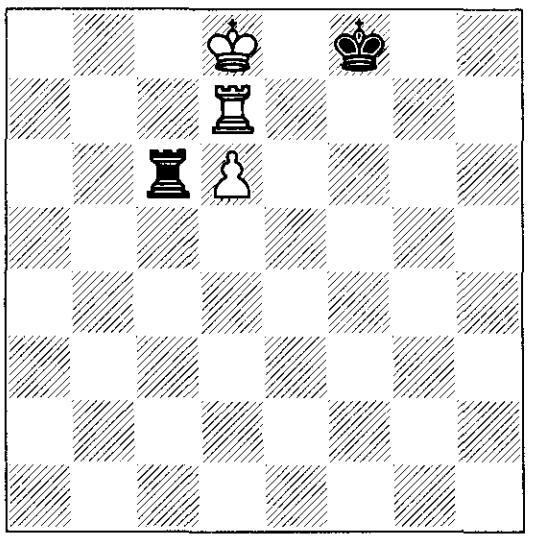


460 +/

*Minev, 1981*

♔d7 ♔d5! see diagram 458) ♔d5! 2 d7 (2 ♔d7 ♖g6 and 2 ♖a8 ♖g7+! are drawn) ♖g7+! 3 ♔d8 ♔d6! wins the pawn.

Here is the last reciprocal zugzwang in this section.

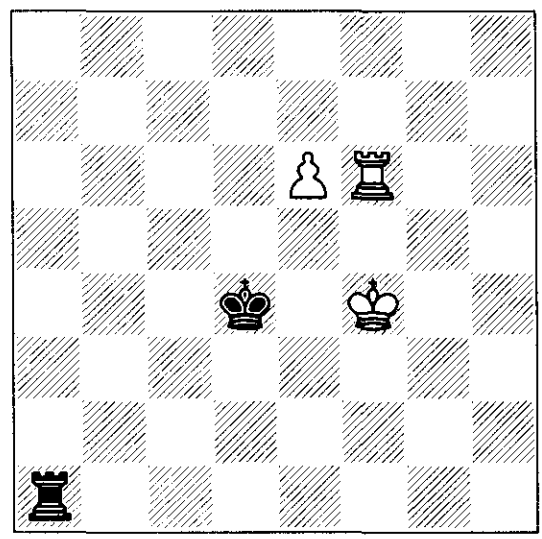


461 =/–

*Original*

(**461**): This resembles diagram 349, but the extra file on the left makes some difference. White to play has no moves at all, so we take Black to play: 1...♖a6 (1...♖b6 2 ♔c7 ♖b1 3 ♖d8+ ♔f7 4 ♖c8 ♖c1+ 5 ♔d8 followed by d7 is even easier) 2 ♔c8 ♖a8+ (2...♔e8 3 ♖e7+! ♔f8 4 ♔d7 wins after 4...♖a7+ 5 ♔e6 ♖a6 6 ♖b7 ♖c6 7 ♖b8+ ♔g7 8 ♔d5, followed by d7, or 4...♖a1 5 ♖e5 ♖a7+ 6 ♔c8 ♖a8+ 7 ♔b7 ♖a1 8 d7) 3 ♔b7 ♖a1 4 ♖e7 ♖b1+ (4...♖d1 5 ♔c7 is the same) 5 ♔c7 ♖c1+ 6 ♔d8 ♖a1 7 ♖c7 ♖a8+ 8 ♖c8 ♖a7 9 d7 ♔f7 10 ♖c1 and wins.

We finish with a tactical position.



462 +/

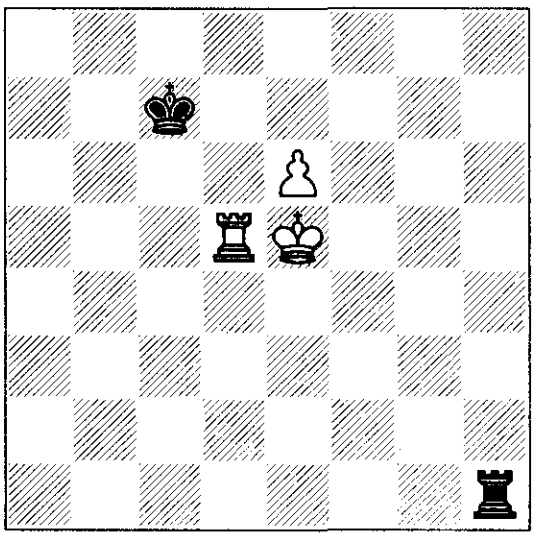
*Minev, 1985 (version)*

(**462**): White wins by 1 ♔f5! (1 e7? ♖e1! 2 ♖f7 ♔d5 and 1 ♔g5? ♖g1+! 2 ♔f5? ♔d5! are easy draws) ♔d5 (the Lucena position arises after 1...♖e1 2 ♔g6 ♔d5 3 ♔f7! ♔d6 4 ♖f2 ♖e3 5 ♖d2+ ♔c7 6 e7) 2 ♔g6! (threat 3 e7) ♖a7 (2...♖e1 3 ♔f7! and 2...♔d6 3 ♔f7! ♖e1 both transpose to the previous note) 3 ♖f7! ♖a6 (3...♖a8 4 e7 ♖e8 5 ♔f5 ♔d6 6 ♔f6! ♔d7 7 ♖h7! results in the reciprocal zugzwang of diagram 434) 4 ♖f5+! ♔d6 (4...♔e4 5 ♔f6) 5 ♔f6! ♖a1 (5...♖a8 6 e7! ♖h8 7

♖f1 wins) 6 ♖f2 ♖e1 7 ♖d2+ ♔c7 8 e7 and again the Lucena position is not far off.

### 4.2.4: Other situations

The first interesting situation arises when Black's king is cut off along a file. If the king is cut off on the long side by even a single file, then Black loses except for a few special positions. The following is one of these:

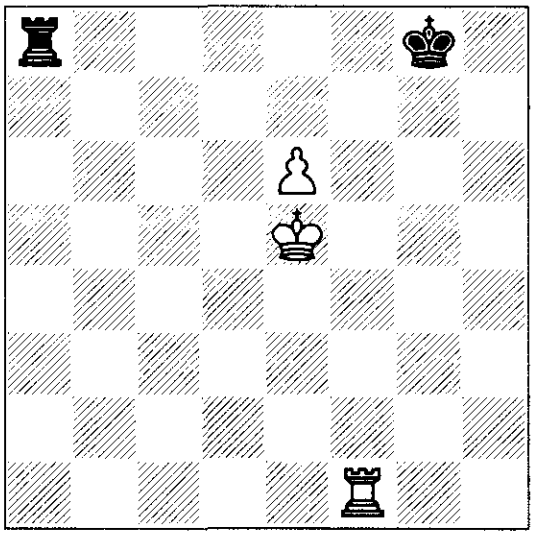


463 +/=

*Chéron, 1944*

**(463):** White to play wins by 1 e7 ♖e1+ 2 ♔f6! ♖f1+ 3 ♔e6 heading for the Lucena position. Black to play draws by 1...♖h5+! 2 ♔e4 ♖h4+! 3 ♔f3 ♖h6 4 ♖e5 ♔d8. However this position is very much the exception, for example if White's rook starts on d4 then he wins easily. Even moving White's king to g4 (with the rook on d5) leads to a White win: 1...♖h6 2 ♖d7+! (White removes his rook from the bad square d5 with gain of time; 2 ♔f5? ♖h5+! is the line above) ♔c6 3 ♔f5! ♖h5+ 4 ♔g6 ♖e5 5 ♔f6 ♖e1 6 ♖d2 ♖f1+ 7 ♔g7 ♖g1+ 8 ♔f7 ♖f1+ 9 ♔e8 and Black cannot avoid the Lucena position.

We move on to the case in which Black's king is on the short side.



464 =/=

*Chéron, 1944 and Minev, 1980*

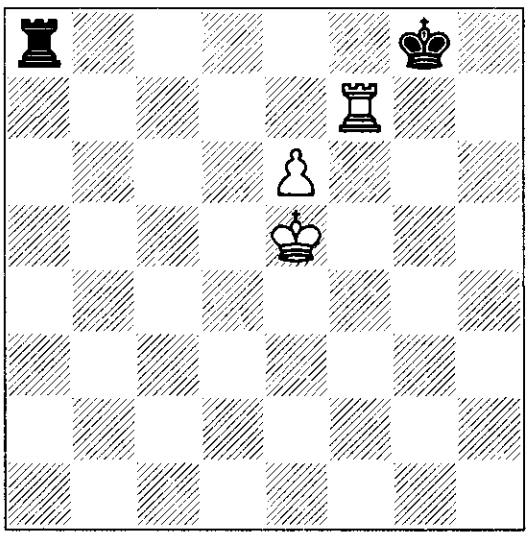
**(464):** It turns out that White to play wins when his rook starts on f4, f6 or f7 (this last contradicts *ECE*), but draws when his rook starts on f1, f2, f3 or f5. In the diagram position Black to play draws most easily by means of 1...♖a7 (or 1...♔g7 2 ♖f7+ ♔g6!, but not 1...♖a5+? 2 ♔f6! ♖a6 3 ♖b1 and wins) 2 ♖f4 ♔g7! and White cannot make progress. With White to play, 1 e7 (1 ♖g1+ ♔f8! 2 ♔f6 ♖a7! and 1 ♖d1 ♔g7! 2 ♖d7+ ♔g6! are drawn) ♔g7! (1...♖a5+? 2 ♔f6 ♖a6+ 3 ♔g5 ♖a5+ 4 ♔g6 wins) 2 ♖d1 ♔f7! is an easy draw.

**W♖f4 (or f6):** Now White to play wins by 1 e7! ♔g7 2 ♖a4! (2 ♖a1 did not work with the rook on f1 because Black could simply take the rook) ♖b8

3 ♔e6 ♖b6+ 4 ♔d7! ♖b7+ 5 ♔d8 ♖b8+ 6 ♔c7 followed by ♔d7.

**W♖f5:** Now White's king blocks the rook's path to the a-file and 1 e7 ♔g7! is again a draw.

We deal with the case of W♖f7 in the next diagram.

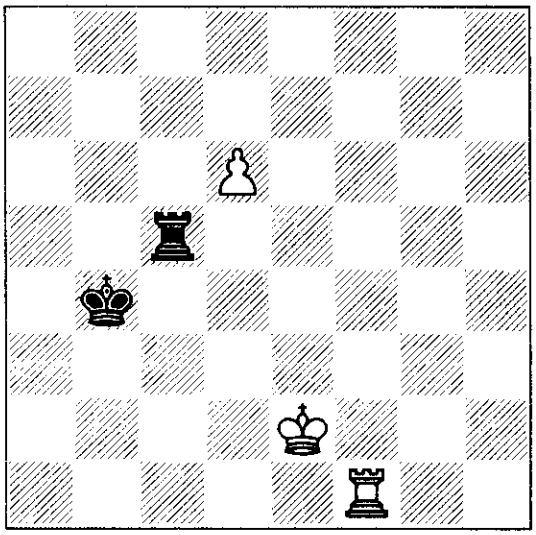


465 +/=

*Chéron, 1944 and Minev, 1985*

(**465**): White to play wins if his king starts on e5 or f5, but if the king starts on d5 then the position is drawn. Taking the diagram first, Black to play defends by 1...♖a1 2 ♔f6 ♖f1+! 3 ♔e7 ♖a1! 4 ♖f8+ (4 ♖f2 ♖a7+! draws as in diagram 448) ♔g7! 5 ♖d8 ♖a7+ 6 ♖d7 ♖a8, with a draw by diagram 446, but White to move plays 1 ♖b7 (threat 2 ♔f6) ♖a5+ 2 ♔f6 ♖a6 (2...♖a8 3 ♖g7+ ♔h8 4 ♖g5 wins) 3 ♖b8+ ♔h7 4 ♔f7, followed by e7, and wins. Play is the same if the king stands on f5, but with the king on d5 Black draws after 1 ♖b7 ♔f8! (1...♖a5+? 2 ♔d6! wins) 2 ♔d6 ♔e8.

We finish with a few positions of special interest.



466 +/

*Herberg, 1954*
*Deutsche Schachzeitung*

(**466**): White has two different winning moves, both based on the same tactical point:

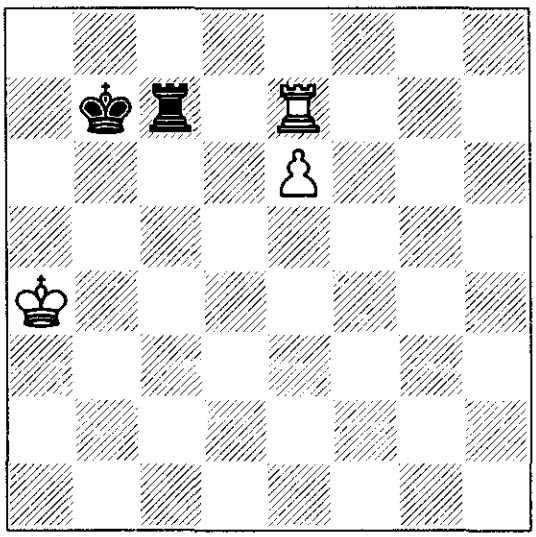
1) **1 ♖d1** ♖c8 (1...♖e5+ 2 ♔f3 ♖e8 3 d7 ♖d8 4 ♔e4 wins) 2 ♖b1+! ♔a5 3 ♔d3 (or 3 ♔e3) ♖c6 (3...♖d8 is met the same way, while after other moves White's king advances to support the pawn) 4 ♔d4! ♖xd6+ 5 ♔c5! mating or winning the rook.

2) **1 ♖b1+** ♔a5 (otherwise 2 d7 wins, for example 1...♔a4 2 d7 ♖e5+ 3 ♔d3! ♖d5+ 4 ♔c4! with the same type of mating trick as in the main line) 2 ♔d3! ♖d5+ (2...♖c6 3 ♔d4! is the same, while otherwise ♔d4 wins by supporting the pawn with the king) 3 ♔c4! ♖xd6 4 ♔c5! wins.

(**467**): The composer intended this to be a win with White to move, but the study is unsound.

After 1 ♖f7 Black has the choice between:

1) **1...♔c8** 2 ♔b5 (not 2 e7? ♖c4+! 3 ♔b5 ♖e4! drawing) ♖c1 (2...♔d8 3



467 =/
*Proskurowski, 1969 (end of study)*
*Special Prize, Rubinstein Mem. Tny.*

♖xc7) 3 ♖f8+! ♔c7 4 e7! and White wins.

2) **1...♔b6!** 2 ♔b4 (2 e7 ♖c4+! and 3...♖e4! still draws) ♖c8 3 e7 ♖e8! and Black draws.

There are 11 positions of reciprocal zugzwang in the ending of ♖+♙d6 v ♖. Two may be found under diagram 447 (with W♖a7), two under diagram 456 and two more under diagram 459. Diagrams 444, 455 and 461 give a total of nine. The other two are W♔b6, ♖c6, ♙d6 v B♔b4, ♖d7 and W♔f6, ♖e6, ♙d6 v B♔f4, ♖d7, which need no analysis since they are derived from diagram 22.

**Practical tips:** A lot of the material in this section is of direct relevance to practical play, especially diagrams 446-8. These endings arise very frequently in practice, but they are sufficiently complicated that it is quite easy to go wrong. Practical players should also pay attention to diagrams 442, 443 and 464.

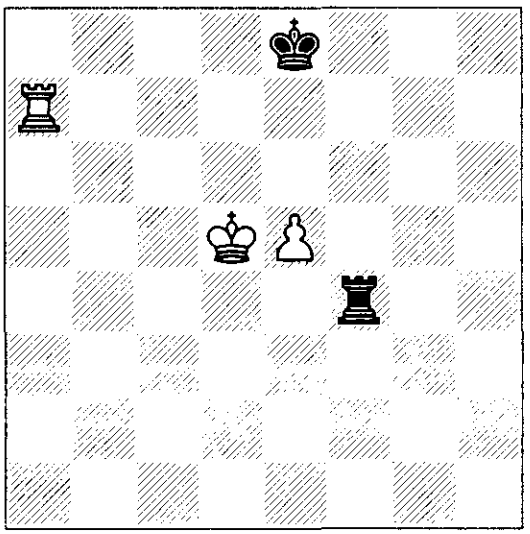
## 4.3: Pawn on the fifth rank

4.3.1: Black's king is in front of the pawn 280
4.3.2: White's king is in front of the pawn 283
4.3.3: Black's king is cut off along a file 287
4.3.4: Other situations 289

### 4.3.1: Black's king is in front of the pawn

As with the c-pawn, in general this is a draw. Black's main aim is to occupy the third rank with his rook. If this isn't possible then White can sometimes win. In cases where Black cannot maintain his king in front of the pawn he can usually choose whether the king moves to the long side or the short side. Normally the short side is better.

**(468):** This is a typical case. Black to play draws by 1...♖b4 and his rook settles on the third rank. White to play wins by 1 ♔e6! (1 ♔d6? ♖e4! 2 ♔e6 ♔f8 3 ♖a8+ ♔g7! draws after 4 ♔d6 ♔f7! or 4 ♖e8 ♖a4) ♔f8 (going to the short side is relatively best; 1...♔d8 2 ♖a8+! ♔c7 3 ♔e7 ♖h4 4 e6 ♖h7+ 5 ♔f6! ♖h6+ 6 ♔f7 ♖h7+ 7 ♔g6 wins



468 +/=

*Philidor, 1777*

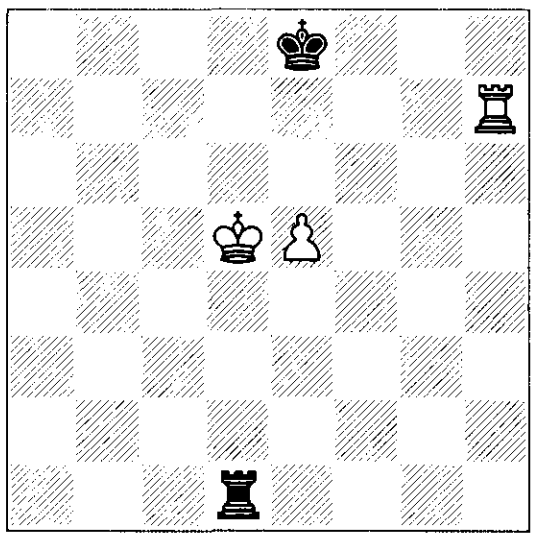
more easily) 2 ♖a8+! ♔g7 3 ♔d6 ♖d4+ 4 ♔e7! (4 ♔e6? ♖b4 draws – see below) ♖b4 5 e6 wins by diagram 447 with W♖a8.

Now move White's rook to b7. Then the position is a draw, even with White to move. The reason is that after 1 ♔e6 ♔f8! (1...♔d8? loses to 2 ♖d7+! when 2...♔e8 3 ♖a7! is the diagram while 2...♔c8 3 ♔e7 ♖h4 4 e6 wins as in diagram 461, note to Black's second move) 2 ♖b8+ ♔g7 3 ♔d6 (3 ♖a8 ♖b4 4 ♔d6 ♖b6+! 5 ♔d7 ♖b7+ 6 ♔c6 ♖b1 7 e6 ♔f6! is also a draw) ♖d4+ 4 ♔e7 ♖a4!, Black can occupy the important a-file; then 5 e6 ♖a7+ 6 ♔d6 ♖a6+! leads to a clearly drawn position.

Now move Black's king from e8 to d8 in the diagram. The position is again drawn, this time because after 1 ♔e6 Black is not threatened with immediate mate and has time to improve his rook position: 1...♖e4 2 ♖a8+ ♔c7 3 ♖e8 ♖h4! draws as in diagram 472.

Moving Black's rook to f1, f2 or f3 doesn't affect the above results.

Finally, move Black's rook from f4 to e1 in the diagram (Lasker, 1925). When Black's rook is on the same file as the pawn he can draw. After 1 ♔e6 ♔f8 2 ♖a8+ ♔g7 White cannot play ♔e7 and the line 3 ♖e8 (or 3 ♔d6 ♔f7) ♖a1 offers White no winning chances at all.

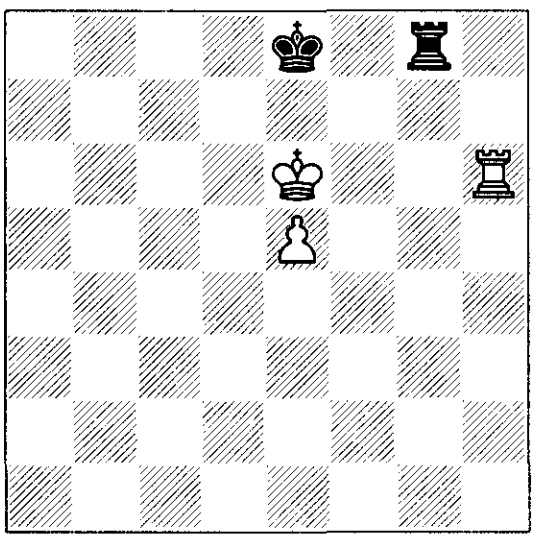


469 +/

*Kopaev, 1955*

(**469**): Now suppose that White's rook is on the other side of Black's pawn. White can win in the above position, but accurate play is required: 1 ♔e6! ♔f8 (as usual, the short side is relatively best; 1...♔d8 2 ♖h8+! ♔c7 3 ♔f6 wins easily) 2 ♖f7+! (not 2 ♖d7? ♖e1 nor 2 ♖h8+? ♔g7! 3 ♖a8 ♖b1 as in diagram 468 with W♖b7) ♔g8 (after 2...♔e8 3 ♖a7! White wins as in diagram 468) 3 ♖d7! (3 ♖a7 ♖e1! draws after 4 ♔d6 ♔f8! or 4 ♔f6 ♖f1+! and White cannot play ♔e7) ♖e1 (after 3...♖a1 4 ♔e7 White wins one move more quickly) 4 ♔f6! (4 ♔d6? ♔f8! draws) ♖f1+ (Black must prevent the threat of 5 ♖d8+ ♔h7 6 e6)

5 ♔e7! (not 5 ♔e6? ♔f8!) ♖a1 (after 5...♖f7+ 6 ♔d6 or 5...♔g7 6 ♔e8+ White wins by 7 e6; the position after the text-move is a win even with Black to move – see diagram 477) 6 ♖d2 (not the obvious 6 e6? because of 6...♔g7! with a draw by diagram 446) ♖a7+ (Black must prevent ♖g2+) 7 ♔f6! (threat 8 ♖d8+ and 9 e6) ♖f7+ 8 ♔e6! ♖f1 (Black cannot return to a7 because of ♖d8+ followed by ♖d7+, nor can he play 8...♔g7 because of 9 ♖d7!) 9 ♖a2! (this is the point of White's last few moves; he seizes the a-file) ♔g7 (9...♖b1 10 ♔f6! ♖f1+ 11 ♔e7! ♖f7+ 12 ♔d6! followed by e6 wins, but not 12 ♔e6? ♔g7! drawing) 10 ♖a7+ ♔g6 (10...♔f8 11 ♖a8+ is the same) 11 ♖a8 ♔g7 12 ♔d6 (White wins only because his rook occupies the a-file) ♖d1+ 13 ♔e7! (13 ♔e6? ♖e1) ♖b1 14 e6 wins by diagram 447 with W♖a8.



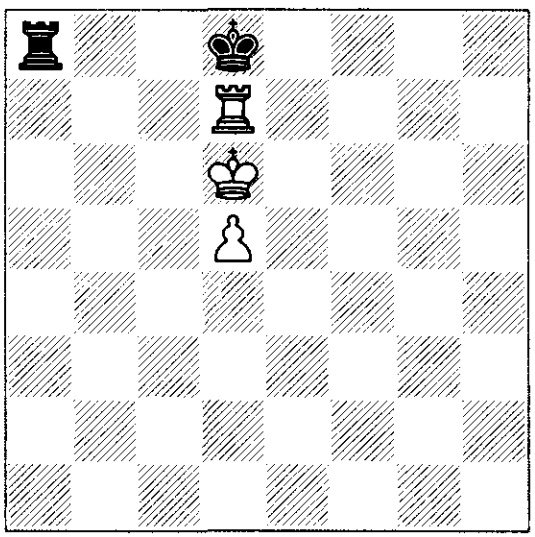
470 =/–

*Original*

**(470):** This reciprocal zugzwang seems to have been overlooked until the advent of the computer. With Black to move, 1...♔f8 (1...♔d8 2 ♔d6 followed by e6 wins, as does 1...♖f8 2 ♔d6 – see the main line) 2 ♔f6! (2 ♔d6 ♔g7 3 ♖h1 ♖a8 draws) ♔e8 3 ♖h4 (threat 4 ♖a4) ♖f8+ (3...♔d8 4 ♔f7 ♖g1 5 ♖d4+ followed by e6 wins) 4 ♔e6! ♖g8 (4...♔d8 5 ♔d6 is similar) 5 ♔d6! ♖g1 6 ♖h8+! ♔f7 7 e6+ ♔f6 8 ♖f8+! and 9 e7 wins.

With White to play, 1 ♔d6 (1 ♔f6 ♖f8+ 2 ♔e6 ♖g8 repeats the position, while 1 ♖h7 ♖g6+ draws) ♔f7! 2 e6+ (2 ♔d7 ♖a8) ♔g7! 3 ♖h1 ♖a8! 4 ♖g1+ ♔f6! 5 ♖f1+ ♔g7 6 ♖f7+ ♔g6 leads to a draw.

There is one nasty trap in this ending.



471 /=

*Original*

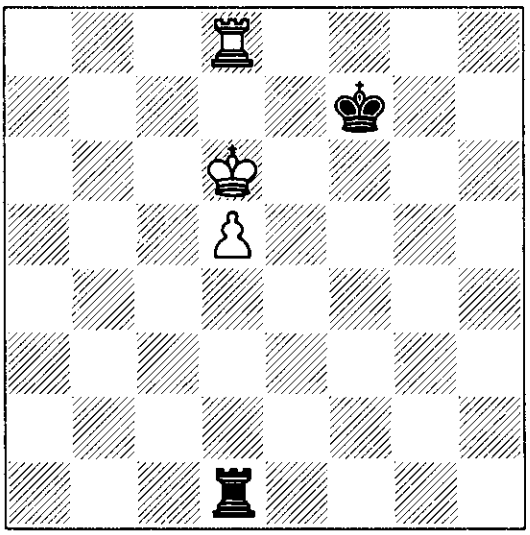
**(471):** Which way would you move your king in this position? Knowing that the short side is usually better, many players might continue 1...♔c8?, but this loses after 2 ♔e7! ♖a5 (or 2...♖a1 3 ♖d8+! ♔b7 4 ♖h8! ♖e1+ 5 ♔d7 ♖g1 6 d6 ♖g7+ 7 ♔e6! ♖g6+ 8 ♔e7 ♖g7+ 9 ♔f6) 3 ♖d8+ ♔b7 4

♔e6! (threatening ♖h8; not 4 d6? ♖h5 5 ♖f8 ♔c6 drawing) ♔c7 (4...♖a1 5 ♖h8 wins as in the note to Black's second move) 5 ♖d7+! ♔b6 6 ♖h7 ♖a8 7 d6 ♖e8+ 8 ♔d7 ♖g8 9 ♖h1 ♖g7+ 10 ♔e8 ♖g8+ 11 ♔f7 ♖g2 12 ♖d1 wins.

The correct line is 1...♔e8! 2 ♖c7 ♔d8, when Black draws easily.

### 4.3.2: White's king is in front of the pawn

First of all we will consider the case in which the defender's king is on the long side of the pawn. White has some winning chances, but everything depends on the exact position of the pieces.



472 +/=

*Horwitz and Kling, 1851*

**(472):** This is the most common situation, because it often arises from positions in which Black's king is in front of the pawn. Black to play draws by 1...♖a1! and now:

1) **2 ♖d7+** ♔e8! (not 2...♔f6? 3 ♖c7 winning as in diagram 473 on the following page) 3 ♖e7+ (3 ♖b7 ♖a6+) ♔d8! draws easily.

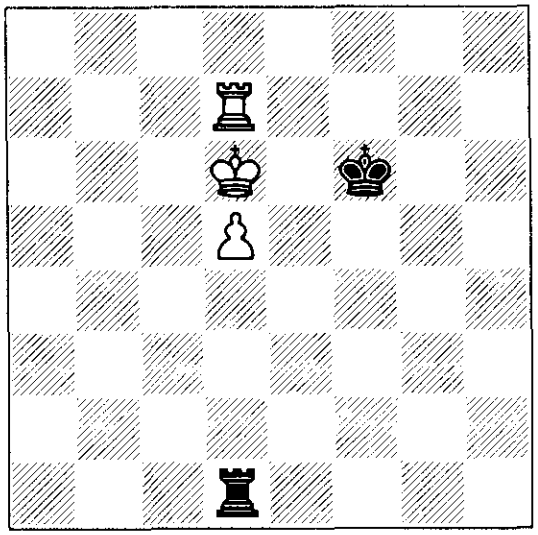
2) **2 ♖b8** (2 ♖c8 ♖d1! is the same) ♖d1! (the only move; 2...♖a6+ 3 ♔d7! ♖a7+ 4 ♔c6! ♖a6+ 5 ♖b6 ♖a8 6 ♔c7 ♔e8 7 ♖e6+! ♔f7 8 ♖e4 ♖a7+ 9 ♔b6 ♖d7 10 ♔c6 followed by d6 wins) 3 ♖b2 (3 ♔c6 ♔e7! and 3 ♖b7+ ♔e8! are also drawn) ♔e8 (the threat was ♖e2) 4 ♖e2+ ♔d8 5 ♖h2 ♔c8 (5...♔e8 also draws) and Black's task is even easier when his king is on the short side.

However White to play wins by 1 ♔c7! (1 ♖a8? ♖d2) ♖a1 (1...♖c1+ 2 ♔d7! ♖a1 3 ♖c8 ♖a7+ 4 ♖c7 wins as in the main line) 2 ♖c8 ♖a7+ 3 ♔c6 ♖a6+ 4 ♔d7 ♖a7+ 5 ♖c7 ♖a1 6 d6 and Black loses because his rook is on the short side.

A useful point to note in the above analysis is that if Black's king is permanently cut off by one file on the long side then White wins.

If Black is unable to set up the draw of diagram 472 then he is usually in trouble. In the following position the black king is badly placed and White wins even if Black is to move.

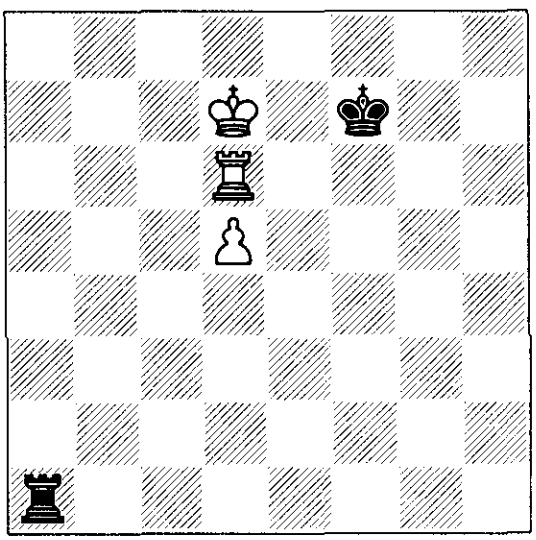
**(473):** We need only take Black to play: 1...♖a1 (or 1...♖d2 2 ♖a7 ♖d1 3 ♔c6 ♖c1+ 4 ♔d7 followed by d6) 2 ♖c7 ♖a5 (2...♖a6+ 3 ♖c6 is similar) 3 ♖c6 ♖a8 (3...♔f7 4 ♖c8 is zugzwang because if the rook moves on the a-file White plays ♔d7, while 4...♔f6 is met by 5 ♖f8+) 4 ♖b6! (now 5 ♔d7+ is a threat, but not 4 ♔d7+? ♔e5! 5 d6 ♔d5! drawing) ♖a7 (4...♔f7 5 ♖b7+ ♔f6 6 ♔d7 ♔e5 7 d6! ♖a6 8 ♖b5+! ♔f6 9 ♖d5 wins as in the main line) 5



473 +/–

*Kopaev, 1952*

♖b1 (5 ♔c6? ♔e5! 6 d6 ♔e6! 7 ♖b1 ♖a6+! 8 ♔c7 ♖a7+! draws) ♖a6+ (5...♔f7 6 ♖e1 wins) 6 ♔c7! (6 ♔d7? ♔e5!) ♖a7+ (6...♔e5 7 d6 ♖a7+ 8 ♔b6 ♖d7 9 ♔c5! followed by ♖e1+ wins) 7 ♖b7 (7 ♔b6? ♖d7! 8 ♔c6 ♔e7! draws) ♖a8 (7...♖a1 8 d6 ♔e6 9 d7! wins) 8 ♔d7 (8 d6? ♔e6!) ♔e5 (8...♔f7 9 d6) 9 d6! ♖a6 10 ♖b5+! ♔f6 11 ♖d5 ♖a1 12 ♖d2 ♖a3 13 ♔d8 and wins.



474 +/=

*Iglitsky, 1955*
*Shakhmaty v SSSR*

**(474):** White to play wins by 1 ♖c6 ♖a7+ 2 ♖c7 followed by d6. With Black to play the position is far more interesting:

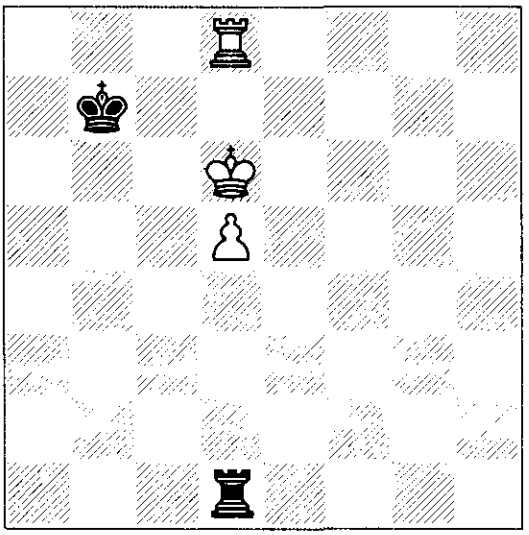
1) **1...♖d1?** 2 ♔c7 ♔e7 (or else ♖d8 wins as in diagram 472 with White to play) 3 ♖e6+ ♔f7 4 ♔c6 and we already know that Black loses when his king is cut off by one file on the long side.

2) **1...♖a5** (1...♖a7+ 2 ♔c8 ♖a5! also draws) 2 ♔c7 (2 ♔c6 ♔e8 draws) ♔e7 (2...♖c5+? 3 ♔b6! ♖c1 4 ♖e6 wins) 3 ♖d7+ (or 3 ♖e6+ ♔f7! 4 ♖e5 ♔f6! 5 ♖h5 and now not 5...♔g6? 6 ♔b6! nor 5...♖c5+? 6 ♔d6! ♖a5 7 ♖h1, but 5...♖a7+! 6 ♔c6 ♖a6+! 7 ♔b5 ♖a1 drawing) ♔e8 (the simplest draw, although 3...♔f6 is also adequate) 4 ♖d8+ ♔f7! 5 d6 ♖a7+! 6 ♔c6 ♖a6+! 7 ♔b7 ♖a1 is a comfortable draw.

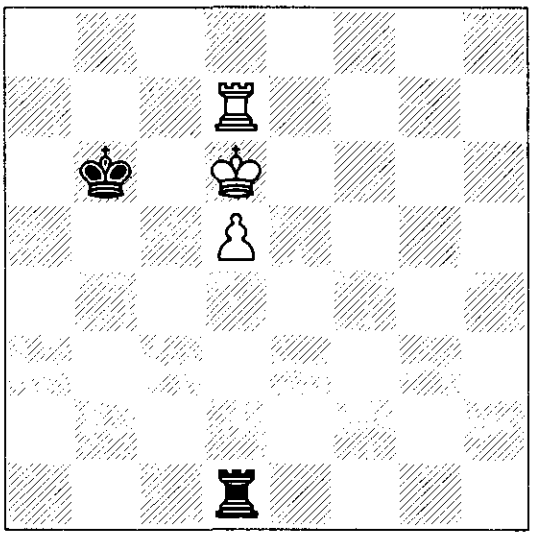
At this stage it is worth mentioning the reciprocal zugzwang W♔d8, ♖d7, ♙d5 v B♔f8, ♖c5. It does not deserve a diagram because it is closely related to diagram 461. With Black to play, 1...♖a5 2 d6! ♖a8+ 3 ♔c7! ♖a7+ 4 ♔c6 ♖a6+ 5 ♔b7 ♖a1 transposes to diagram 461. When White is to move, 1 ♖d6 (1 d6 ♖c6! is diagram 461) ♔f7 2 ♔d7 ♖a5! transposes to diagram 474.

We now move on to the case in which the defender's king is on the short side of the pawn. This improves Black's chances enormously and the general position is drawn.

**(475):** In diagram 472 we saw that Black loses when his king is on f7 and White is to move, but here the result is



475 =/=



476 =/=

*Kopaev, 1952*

a draw. In fact there is only one square White's rook can start on in order to give White a win when he moves first.

After 1 ♔e7 Black draws easily, for example 1...♖e1+ 2 ♔d7 ♖h1 3 ♖e8 ♖h7+ 4 ♖e7 ♖h8 5 d6 ♔b6.

However, if White's rook starts on h5 then he wins by 1 ♔d7! ♖g1 2 ♖h7! (not 2 d6? ♖g7+! 3 ♔e6 ♔c6! with a draw; however, the hasty 3...♖g6+? would allow 4 ♔d5! ♖g8 5 ♖h7+! winning as in line 1 of diagram 451) ♖g6 3 d6! ♖g8 4 ♔e6+! winning as in diagram 447 with W♖a7. In order to win White must both defend the d-pawn to allow ♔d7 and control the h-file. Both conditions are satisfied only when the rook starts on h5.

**(476):** As a further illustration of Black's improved chances, we take the position analogous to Kopaev's diagram 473. With the black king on f6 White won, even with Black to move, but now the position is drawn. White can try 1 ♖h7 ♖d2 (1...♖g1? 2 ♔d7! ♔b7 3 d6 wins just as in the previous diagram with W♖h5) 2 ♖h5 (2 ♔e6 ♔c5!), but 2...♖g2! 3 ♔d7 ♖g7+! 4 ♔e6 ♖g6+ draws.

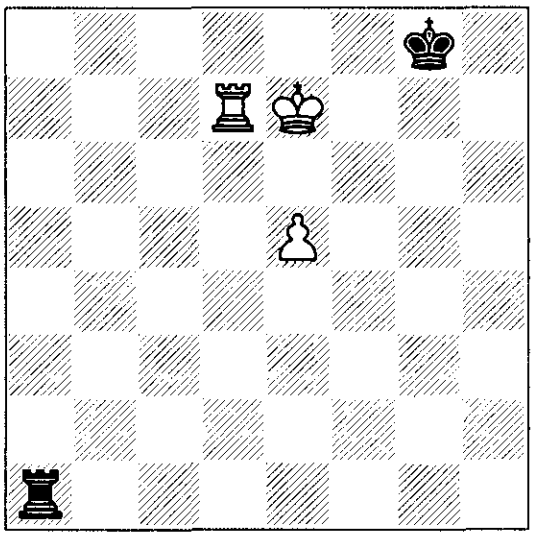
In diagram 476, White wins if his rook is on a square from which it can check on the b-file, or if the rook starts on e6, f6 or h6. The reason for the latter is that on h6 White wins because he controls the h-file, while on e6 and f6 he wins by 1 ♔d7+ and 2 d6 (see diagram 446). It is just bad luck if the rook is initially on g6!

In the remainder of this section we examine some positions in which one of the defender's pieces is badly positioned, because only in this case does White have winning chances.

**(477):** Black to play can try:

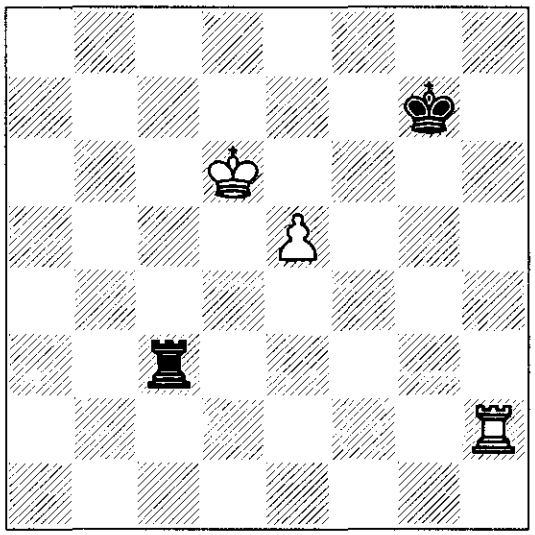
1) **1...♖a5** 2 ♔f6 (Black has no check on the f-file) ♖a1 3 ♖d8+ ♔h7 4 e6 wins easily.

2) **1...♔g7** 2 ♔e8+! ♔g6 (2...♔g8 3 e6 wins) 3 ♖d6+! (3 e6? ♔f6! 4 e7 ♔e6! draws; we have effectively transposed to diagram 407) ♔g7 (3...♔f5 4 e6! ♔e5 5 ♖b6 wins) 4 e6! ♖a8+ 5 ♖d8! followed by e7 wins.



477 +/–

*Chéron, 1960*
*Journal de Genève*



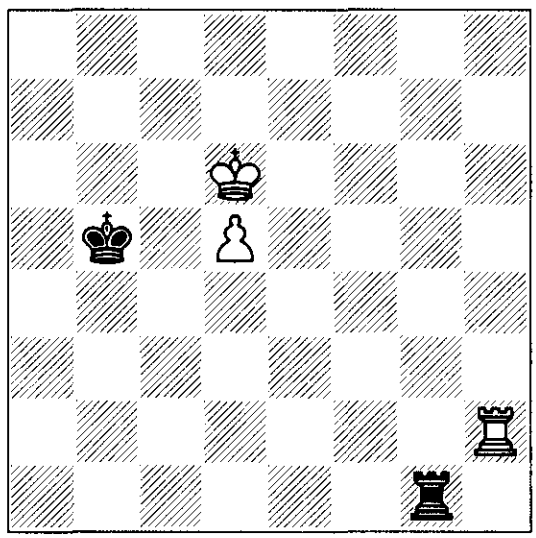
478 +/

**Bolland – Euwe**
*Weston-super-Mare, 1924*

3) **1...♖a2** transposes to diagram 469 after Black's 5th move.

White won this position because Black's king was badly placed on g8 and his own rook was well placed on d7. Move the white rook to c7 and Black to play draws by 1...♔g7! 2 ♔e8+ ♔g6! 3 ♖c6+ ♔g7! 4 e6 ♖a8+! 5 ♔d7 ♔f6. Alternatively, if Black's king starts on g7 then he can draw by 1...♖a6 or 1...♖a8, amongst other possibilities.

**(478):** This example emphasizes the importance of the a-file. In the game White continued 1 ♔d7? (also not 1 e6? ♖a3! drawing) ♖a3 2 ♖c2 ♖a4 3 e6 ♖a7+ 4 ♖c7 ♖a8! with a draw. However, he could have won by 1 ♖a2! ♖b3 (1...♖d3+ 2 ♔e7! threatens ♖g2+ and wins as in the previous diagram) 2 ♖a7+! (2 e6? ♖b6+! draws) ♔g6 (2...♔f8 3 ♖a8+! ♔g7 4 e6) 3 ♔e7! (3 e6? ♔f6! draws) ♖b8 (3...♖h3 4 ♖a6+ ♔f5 5 e6! wins) 4 e6! ♔g7 5 ♔d6+! winning as in diagram 447 with W♖a7.



479 +/=

*Levenfish and Smyslov, 1957*

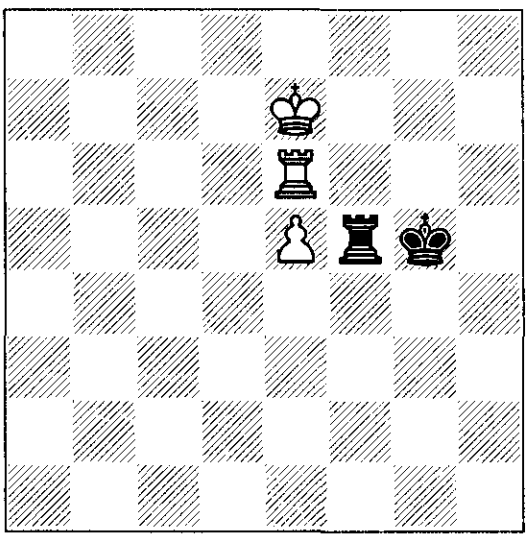
**(479):** White to play wins by 1 ♖b2+, so we take Black to play. Even though his rook is not on the h-file and his king is poorly placed, Black can still draw: 1...♖g6+! 2 ♔e7 and now:

1) **2...♖g7+** (both Chéron and *ECE* incorrectly give this as a loss) 3 ♔f6 ♖g8! (Black has to be careful because of his bad king position; 3...♖g1 loses to 4 ♖d2! and Black cannot bring his

king in front of the pawn) 4 ♔f7 ♖d8! 5 ♔e6 ♔c5! (5...♖e8+? 6 ♔d7! ♖g8 7 d6 wins) 6 ♖d2 (6 ♖c2+ ♔b6! 7 d6 ♖h8! draws) ♖d6+! (*ECE* only gives 6...♖h8 7 d6! winning) 7 ♔e5 ♖d8! 8 d6 ♔c6! 9 ♖c2+ (9 ♔e6 ♖e8+! and 10...♔d7) ♔b7! (9...♔b6? 10 ♔d5! ♔b7 11 ♖b2+ ♔c8 12 ♔c6 ♖d7 13 ♖b8+! wins) 10 ♔d5 (10 ♔e6 ♖h8! also draws) ♖h8! with a draw as in diagram 464.

2) **2...♔c5** 3 d6 (3 ♖d2 ♖g7+! 4 ♔f6 ♖h7 draws easily) ♖g7+! 4 ♔f6 ♖d7! (4...♖g8? 5 d7 wins) 5 ♔e5 ♔c6 6 ♖c2+ (6 ♖d2 ♖h7) ♔b7! (6...♔b6? 7 ♖d2 wins) 7 ♖d2 (7 ♔e6 ♖h7! and 7 ♔d5 ♖h7! are no better) ♔c8! 8 ♔e6 ♖h7 and Black manages to draw.

If White's rook starts on h3 then he cannot win, even with the move, for example 1 ♖h7 ♖g6+ 2 ♔d7 ♔c5 or 1 ♖b3+ ♔c4! 2 ♖e3 ♔d4 drawing.



480 =/–

*Original*

**(480):** This reciprocal zugzwang is closely related to diagram 365. With Black to play:

1) **1...♔g4** (after 1...♔f4 2 ♔d6! Black cannot play ...♖f8 and White wins easily) 2 ♔d7! (2 ♔d6 blocks the rook and after 2...♖f8 the line 3 ♖e7? ♖a8 is drawn, so White must play 3 ♔e7! ♖f5 repeating the position) ♔g5 (2...♖f8 3 ♖a6 followed by e6) 3 ♖e8! (not 3 ♖e7? ♖f8! and again the king gets in the way) ♖f7+ (3...♔g6 4 ♔d6 ♔g7 5 ♖c8 ♖f1 6 e6 wins) 4 ♔e6! (4 ♔d6? ♖a7 draws) ♖g7 (stopping ♖g8+ and threatening to draw by 5...♖g6+! 6 ♔f7 ♖a6 7 e6 ♔f5!) 5 ♖h8 ♔g6 (5...♖g6+ 6 ♔f7! ♖a6 7 e6! wins) 6 ♖h1 and White forces Black's king away by checking on g1.

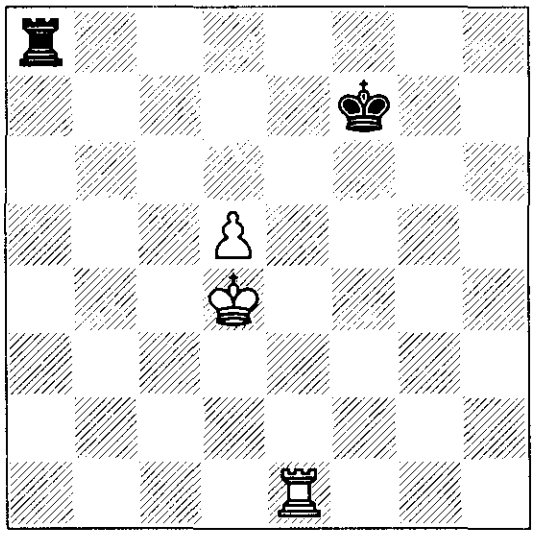
2) **1...♖f1** 2 ♖c6 ♖a1 (2...♖h1 3 e6!) 3 e6! ♔g6 4 ♔d8! winning as in diagram 446 with W♖c6.

With White to play, 1 ♔d7 (1 ♔d6 ♖f1 2 ♖e8 ♖a1 draws) ♖f1 2 ♖a6 ♖e1! (2...♖d1+? 3 ♔e8 ♖e1 4 e6! wins) 3 ♔e6 (3 e6 ♔f6! draws) ♖b1! (3...♖h1? 4 ♖a2! ♖e1 5 ♖a8 ♔f4 6 ♖a5 ♔g5 7 ♔e7 wins, but not 4 ♖a3? ♖b1! drawing as in diagram 479) 4 ♖a2 ♖b6+! reaching diagram 479.

### 4.3.3: Black's king is cut off along a file

Suppose Black's king is cut off on the short side. If it is cut off by one file the position is always drawn, while a two-file cut-off is always winning for White. Therefore we need only deal with the situation in which Black's king is on the long side. If Black's king is cut off by two files the game is over, so we can concentrate on the critical case in which the king is cut off by

one file. The result depends largely on whether Black is able to oppose rooks on the open file. If he can the result is a draw; otherwise he loses.



481 +/=

*Chéron, 1923*

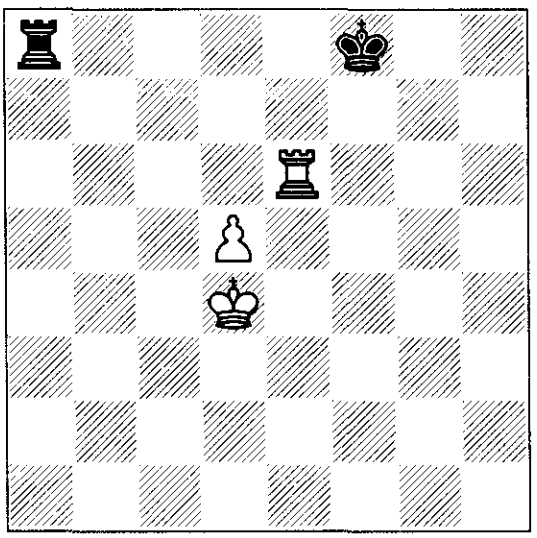
**(481):** White to play wins by 1 ♔c5 (1 d6 also wins) ♖a5+ (1...♖c8+ 2 ♔b6 ♖d8 3 ♔c6 ♖c8+ 4 ♔d7 followed by ♖f1+ and d6) 2 ♔c6 ♖a6+ 3 ♔b5 ♖h6 4 ♔c5 ♖h5 5 ♔c6 and the pawn advances.

Black to play draws by 1...♖e8! (not 1...♖c8? 2 d6 ♖e8 3 ♖e5! ♖a8 4 ♖e7+! ♔f6 5 ♔c5 winning as in diagram 463 with W♔g4) 2 ♖h1 (2 ♖a1 ♔e7) ♔e7 3 ♖h7+ ♔d6! 4 ♖h6+ ♔d7.

Now suppose that the white rook starts on e5. Then White wins, whoever moves first. With White to play 1 ♔c5! (however 1 d6? no longer wins because of 1...♖a4+!, as in diagram 463) ♖a4 (1...♔f6 2 ♖e1 wins) 2 ♖e1 ♖a5+ wins as above. If Black moves first, 1...♖e8 (1...♔f6 and 1...♖a5 are both met by 2 ♖e1 and 2...♖e8 is impossible) 2 d6! ♖a8 3 ♖e7+! ♔f6 4 ♔c5 and again White wins just as in diagram 463 with W♔g4.

Finally suppose that White's rook starts on e6. Then White to play wins by 1 ♖e5, while Black to play draws by 1...♖e8!.

It is worth mentioning that all the above results still hold if Black's rook starts on a7.



482 +/–

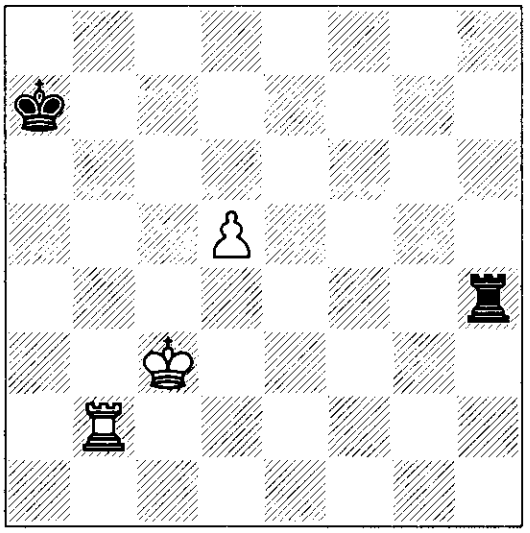
*Chéron, 1944*

**(482):** White's winning chances are slightly increased if Black's king is on f8. In the diagram, White wins even if Black is to move: 1...♖e8 (1...♔f7 2 ♖e5 as above) 2 ♔e5! ♖e7 (2...♖a8 3 d6 ♖a5+ 4 ♔d4 ♖a1 5 ♔c5 wins) 3 ♔d6! ♖a7 4 ♖e1 ♔f7 5 ♔c6 wins as in diagram 481 with White to move.

Just as in the previous diagram, White wins if his rook starts on e5, but if the rook starts on e1, e2, e3 or e4 then 1...♖e8 draws.

We end by looking at two positions in which Black's king is cut off along a file, but White's king is cut off along a rank. If Black's rook occupies the

fourth rank, then a one-file cut-off leads to a draw, but White always wins with a two-file cut-off.



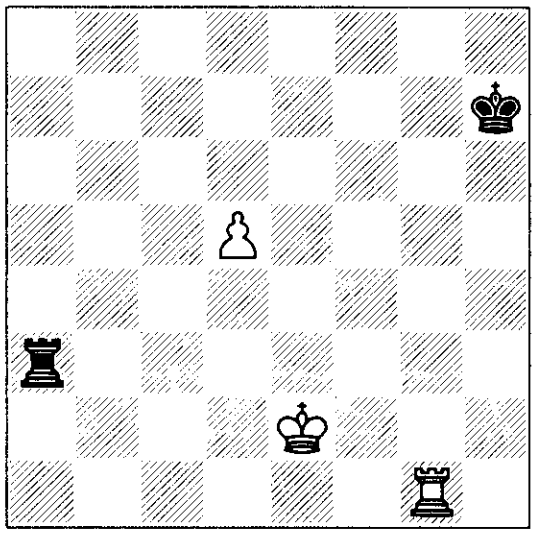
483 +/–

*Chéron, 1944*

**(483):** It doesn't matter who moves first, so we take White to play: 1 ♔d3 (not 1 d6? ♖h6! drawing after 2 d7 ♖c6+ or 2 ♖d2 ♖h8!) ♖g4 (Black can only wait) 2 ♔e3 ♖h4 3 d6 (now this wins) ♖h6 4 ♖d2! (4 d7? ♖e6+! draws) ♖h8 5 d7! ♖d8 6 ♔e4 ♔b7 7 ♔e5 ♔c7 8 ♔e6! ♖h8 9 ♖c2+! ♔b7 10 ♖h2 ♖g8 11 ♔f7 and White is winning.

If White's king is cut off along the third rank, then a two-file cut-off is a draw and a three-file cut-off may or may not win, depending largely on who is to move.

**(484):** White to play wins by 1 d6! ♖a6 (1...♖a5 2 ♖d1! is very similar, while 1...♖a8 2 ♔e3 ♖d8 3 ♖d1! ♔g6 4 ♔e4! ♔f7 5 ♔d5! wins) 2 ♖d1! ♖a8 3 ♔e3 ♔g7 4 ♔d4! ♔f7 5 ♖e1! ♖e8 6 ♖e5! transposes to diagram 481 with W♖e5.



484 +/=

*Original*

Black to play draws by 1...♖a5! 2 ♖d1 (2 d6 ♖e5+!) ♔g7.

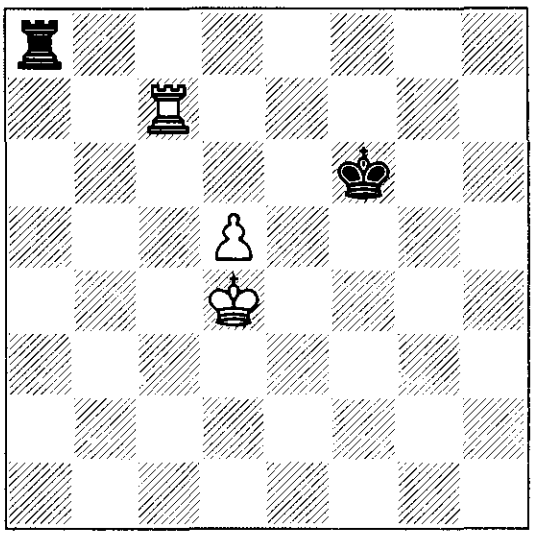
However, if White's rook starts on g5 then White cannot win because after 1 d6 ♖a8! 2 ♔e3 ♖d8! 3 ♖d5 ♔g7 4 ♔d4 ♔f7 his rook prevents ♔d5, but the alternative 5 ♔c5 ♔e6 is an easy draw for Black.

### 4.3.4: Other situations

We briefly mention the situation in which Black's king is cut off along a rank.

**(485):** Here occupation of the c-file is crucial. We take Black to move (White to play wins by 1 ♔c5! as in line 2 below):

1) **1...♖a5** 2 ♖b7! (now this waiting move is possible because Black cannot occupy the c-file) ♖a1 (Black must let the king in to c5 because 2...♔f5 3 ♖f7+ wins) 3 ♔c5 ♖a5+ 4 ♔c6 ♖a6+ 5 ♖b6 ♖a7 6 ♖b1 ♖a6+ 7 ♔c7 ♖a7+ 8 ♖b7 ♖a8 9 ♔d7 followed by d6 and wins.



485 +/–

*Chéron, 1944*

2) **1...♖a1** 2 ♔c5! (the only winning move; if White plays 2 ♖b7? then 2...♖c1! draws) ♖a5+ 3 ♔d6 ♖a6+ 4 ♖c6 ♖a5 5 ♖b6 (threat ♔c7+ and d6) ♖a7 6 ♖b1 ♖a6+ 7 ♔c7! ♖a7+ 8 ♖b7 as in line 1.

If White's rook starts on b7 then Black to play can draw by 1...♖c8!, occupying the c-file.

Next we deal with some positions of reciprocal zugzwang.

**(486):** Black to play loses after:

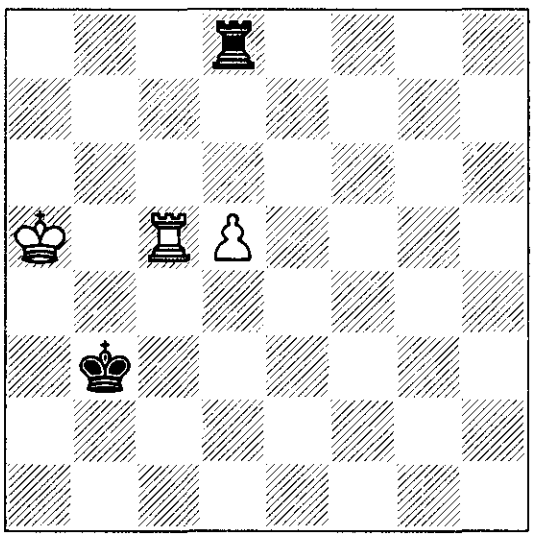
1) **1...♖d7** 2 ♔b6! ♖d8 (2...♔b4 3 ♔c6 ♖d8 4 ♖b5+! ♔c4 5 ♖b1 ♖c8+ 6 ♔d7 followed by d6 wins) 3 ♔c7 (3 ♔c6 also wins) ♔b4 4 ♖a5! ♖h8 5 ♖a1 ♖h7+ 6 ♔c6 and d6 cannot be prevented.

2) **1...♖d6** 2 ♔b5! (this is a second position of reciprocal zugzwang – for White to play see below) ♖d8 (2...♔a3 3 ♔c4 ♖h6 4 ♖c7 ♖a6 5 ♔b5 ♖d6 6 ♔c5 and 7 d6) 3 ♔c6 ♖c8+ 4 ♔d6 ♖h8 5 ♔c7 ♔b4 6 ♖c1 ♖h7+ 7 ♔c6 and wins.

3) **1...♔a3** 2 ♔b5 ♖d6 3 ♔c4 as in line 2.

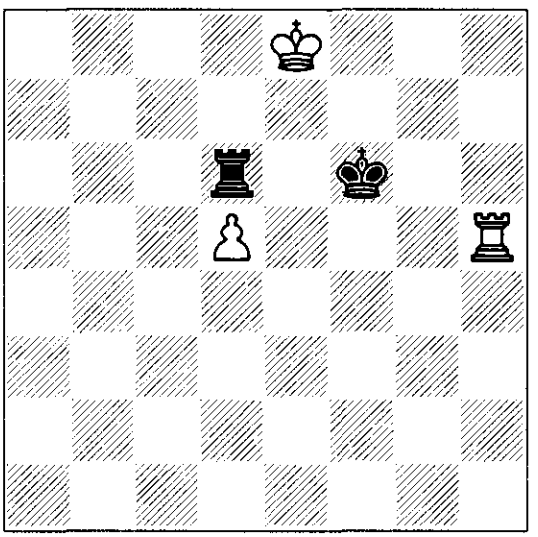
With White to play, after 1 ♔b5 (or 1 ♔b6 ♔b4! and White has no moves) ♖d6! (reciprocal zugzwang) 2 ♔a5 Black may repeat the position with 2...♖d8, although there are other drawing moves.

The reciprocal zugzwang in line 2 above may be reflected to give the position W♔f5, ♖e5, ♙d5 v B♔f3, ♖d6, which is also reciprocal zugzwang.



486 =/–

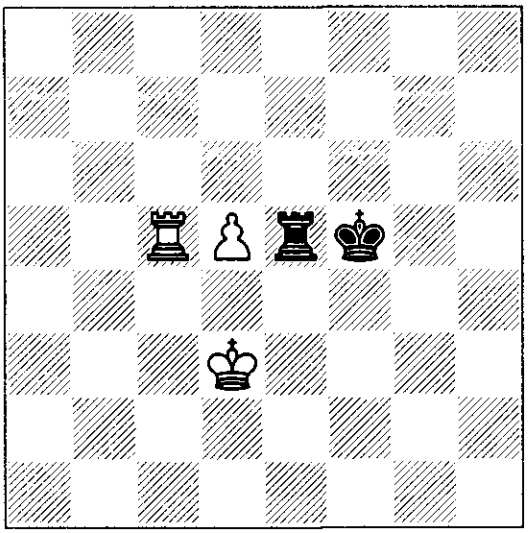
*Original*



487 =/–

*Original*

(**487**): White to play loses his pawn immediately. Black to play can only try 1...♔g6 (1...♔g7 2 ♔e7), but 2 ♔e7 ♖a6 3 ♖e5 ♖a7+ 4 ♔e6 ♖a8 5 d6 ♖e8+ 6 ♔d5! wins easily.



488 =/−

*Original*

(**488**): The most surprising reciprocal zugzwang in this section. The logic is that White would like to play ♔d4 followed by ♖c7 and ♔c5. At the moment, ♔d4 may be met by ...♖e4+, but if Black moves his king away, ♔d4 becomes effective. With Black to play:

1) **1...♔f6** (1...♔g6 is also met by 2 ♔d4!) 2 ♔d4! ♖e1 (2...♖e8 3 ♖c7! is the same) 3 ♖c7! ♖a1 4 ♔c5! winning as in diagram 485.

2) **1...♖e8** (1...♖e1 2 ♖c6! is similar) 2 ♖c6! ♖e4 (or else ♔d4) 3 ♖a6 (a waiting move which puts Black in zugzwang) ♖h4 (if the rook moves on the file, White wins with ♔d4) 4 ♖e6! ♖a4 5 ♔c3 ♖h4 6 ♖e8 (threat d6) ♖h1 7 ♔d4 and wins.

3) **1...♔f4** 2 ♖c4+ ♔f5 3 ♔d4 ♖e1 4 ♔c5 winning.

With White to play, 1 ♖b5 (1 ♔c4 ♖e4+! 2 ♔b5 ♔e5! 3 ♔c6 ♖a4! 4 d6+ ♔e6! 5 ♖c1 ♖a6+! 6 ♔c7 ♖a7+! draws) ♔f6 2 ♔d4 ♖e8 3 ♖b7 ♖c8! draws since, as we pointed out in diagram 485, this position is decided by occupation of the c-file.

There are eight reciprocal zugzwangs in the ending of ♖+♙d5 v ♖. Three may be found under diagram 486, while four others are diagrams 470, 480, 487 and 488. The eighth is mentioned after diagram 474.

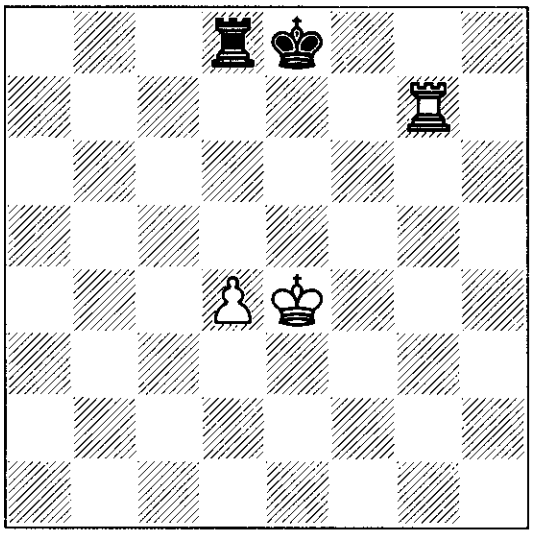
**Practical tips:** This section is one of the most useful in the entire book because the positions occur so often in practice. When Black's king is in front of the pawn, diagrams 468 and 469 are important. The most significant positions in the other sections are diagrams 472, 475, 481 and 485, although the entire section is worth studying.

## 4.4: Pawn on the fourth rank

4.4.1: Black's king is in front of the pawn 292
4.4.2: White's king is in front of the pawn 292
4.4.3: Black's king is cut off along a rank 294
4.4.4: Black's king is cut off along a file 297
4.4.5: Other situations 301

### 4.4.1: Black's king is in front of the pawn

In most cases White has no winning chances, except if the immediate d5 leads to a winning position. However, White can sometimes win if Black's king is trapped on the back rank, but in addition Black's rook has to be badly placed, as in the following example.



489 +/=

*Original*

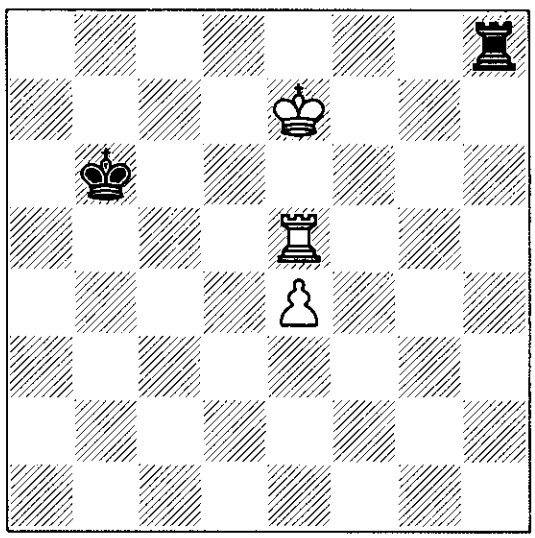
**(489):** Black to play can draw by 1...♖d6, occupying the third rank. White to play can win by 1 ♔e5! ♔f8 (absolutely the only move) 2 ♖h7 (not, for example, 2 ♖b7? ♖e8+! 3 ♔f6 ♖d8 4 d5 ♖d6+! 5 ♔e5 ♖h6 drawing; however 2 ♖c7 also wins because at the end of this line White can play 6 ♖c6! – see line 3a of diagram 491 for details) ♔g8 (2...♖e8+ 3 ♔f6 ♔g8 4 ♖h5 ♖f8+ 5 ♔e7 ♖f7+ 6 ♔e6 followed by d5 wins for White) 3 ♖a7 ♖e8+ (3...♔f8 4 d5 wins) 4 ♔d6 ♖d8+ 5 ♖d7 ♖a8 6 d5 ♖a6+ 7 ♔e7 ♖a1 8 ♖d8+ ♔g7 9 d6 and wins.

Exceptionally, there is a position of reciprocal zugzwang, namely W♔d6, ♖a6, ♙d4 v B♔d8, ♖c8.

This position is connected to diagram 470. With Black to play, 1...♔e8 (1...♖b8 2 d5! is diagram 470) 2 ♔e6 ♔f8 (2...♔d8 3 d5 as in diagram 470) 3 ♔d7 ♖b8 4 d5 reaches a winning position. With White to move, 1 d5 ♖b8! is diagram 470 again, 1 ♖b6 and 1 ♖c6 are met by 1...♖a8, 1 ♔e6 ♖c1 is safe for Black and finally 1 ♖a7 ♖b8! threatens ...♖b6+, with a simple draw in prospect.

### 4.4.2: White's king is in front of the pawn

This section is relatively small, as when the pawn is so far back White normally only has winning chances when Black's king is cut off in some way and then the position falls into one of the next two sections. However, we look at a few positions which do not easily fit into another category.



490 /–

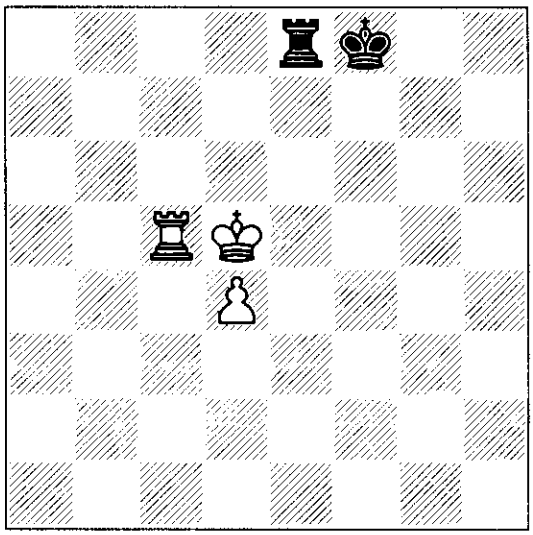
*Kopaev*

(**490**): Black's king is on the long side and he must waste a tempo moving it to the c-file: 1...♔c6 (1...♖h7+ 2 ♔d6 ♖h1 3 ♖e6 ♖d1+ 4 ♔e7+! ♔c7 5 e5 ♖e1 6 ♔f7 ♔d7 7 ♖d6+ ♔c7 8 ♔f6 wins) 2 ♖f5! ♖h7+ 3 ♖f7! (*ECE* gives this as leading to a draw, but in fact it is the only way to win because after 3 ♔e6 ♖h8 White's sole winning move is 4 ♔e7! repeating the position) ♖h5 (*ECE*'s 3...♖h4 fails to 4 e5! ♔d5 5 e6! winning) 4 ♔e6 ♖h6+ (after other rook moves White plays e5 winning as in diagram 473) 5 ♖f6 ♖h1 6 e5 reaching diagram 473 in any case. At the end, Black doesn't have time to play both ...♔c7 and ...♖e1, which would set up the draw of diagram 472.

Now move Black's rook to d3 in the diagram. Then Black to play draws by 1...♔c6! (1...♖e3 2 ♔d6 wins) 2 ♖a5 (2 ♖e6+ ♔c5! draws after 3 e5 ♖e3! 4 ♔f6 ♖f3+! followed by ...♔d5, or 3 ♔f6 ♔d4 4 e5 ♖f3+! and ...♔d5) ♖d7+! 3 ♔e8 ♖d4 (the simplest draw) 4 e5 ♔b6! followed by ...♖e4 winning the pawn.

Finally, move Black's rook to d2. Now White wins after 1...♔c6 2 ♖e6+! ♔c5 (2...♔c7 3 e5 ♖e2 4 ♔f7) 3 e5! ♖e2 4 ♔d7 ♖h2 (now that the rook is further away, White can meet 4...♔d5 by means of 5 ♖d6+!) 5 ♖a6 ♖h7+ 6 ♔e8 ♖h8+ 7 ♔f7 ♖h7+ 8 ♔g6 followed by 9 e6.

(**491**): This position doesn't look very promising, but White can win with accurate play. The solution is 1 ♖c6! (not 1 ♖c7? ♖e1! 2 ♔d6 ♔e8 3 ♖c8+ ♔f7! 4 d5 ♖d1! with a draw by diagram 472) and now:



491 +/

*Original*

1) **1...♖a8** (1...♖e1 2 ♖e6! is similar) 2 ♖e6! ♖a5+ 3 ♔c4! ♖a8 (we know from diagram 481 that Black must prepare to meet d5 by ...♖e8) 4 ♔c5 ♖c8+ (4...♔f7 5 d5) 5 ♔b6 ♖d8 (5...♖b8+ 6 ♔c6 forces through d5) 6 ♖e4 ♔f7 7 ♔c7 ♖d5 8 ♔c6 followed by d5 and wins.

2) **1...♖d8+** 2 ♖d6! ♖c8 (2...♖a8 3 ♖e6!) 3 ♖e6 ♔f7 4 ♖e4! ♔f6 5 ♔d6! ♔f5 (5...♖c4 6 ♖e6+ and 7 d5, or 5...♖d8+ 6 ♔c7! ♖d5 7 ♔c6!) 6 ♖e5+! ♔f4 (6...♔f6 7 ♖e6+ and 8 d5) 7 ♖e6 ♖d8+ 8 ♔c5! ♖c8+ 9 ♖c6! ♖a8 10 d5 ♔f5 11 ♖e6 and wins.

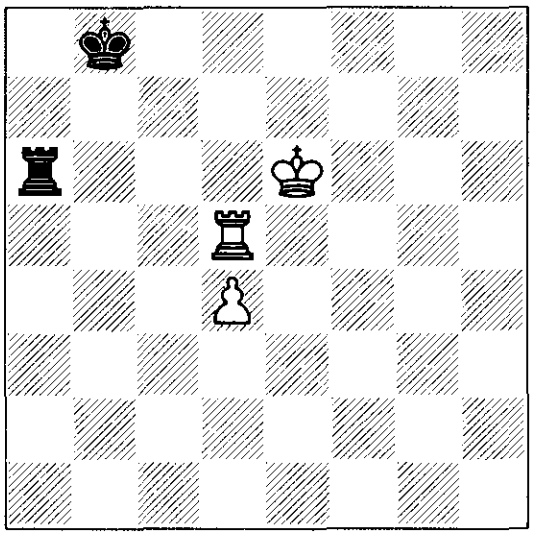
3) **1...♔f7** (to prevent ♖e6) 2 ♖c7+! and now:

3a) **2...♔f8** 3 ♔d6 ♖d8+ 4 ♔e5! ♖e8+ 5 ♔f6! ♖d8 6 d5! ♖d6+ (6...♔g8 7 ♔e6) 7 ♔e5! ♖h6 (Black occupies the third rank, but White's rook is on just the right square to drive Black away) 8 ♖c6! (8 d6? ♔e8!) ♖h1 9 ♔e6 ♖e1+ 10 ♔d7 ♖e7+ 11 ♔c8 ♖e8+ (11...♖a7 12 ♔d8 ♖a8+ 13 ♖c8 ♖a6 14 ♔d7+ ♔f7 15 d6) 12 ♔b7 ♖e1 13

d6 ♔e8 14 ♔c7 ♖d1 15 ♖c2 and White wins.

3b) **2...♔f6** 3 ♔c5 ♖a8 4 d5 winning as in diagram 485.

We end this section with a fascinating position.



492 +/

**Marjanović – Bronstein**
*Vršac 1979*

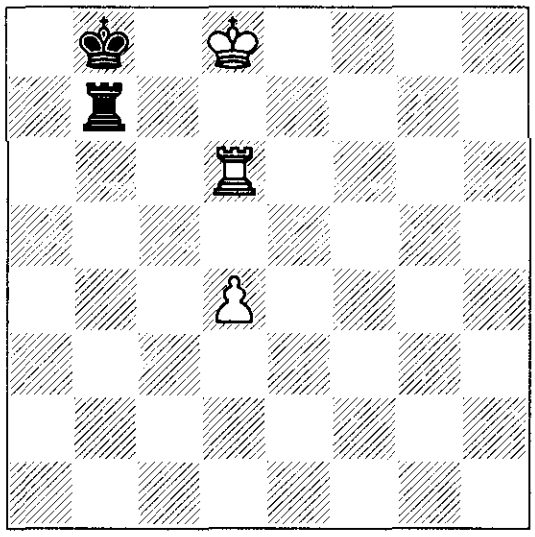
(**492**): *ECE* wrongly gives this position as a draw. After 1 ♔d7! (threat ♖b5+) ♖a7+ (1...♖b6 2 ♖e5! transposes to the main line) 2 ♔d8! Black may play:

1) **2...♖a4** (the game continuation makes life easy for White) 3 ♖b5+! ♔a7 4 ♔c7! (4 d5? ♔a6! followed by ...♖d4 draws) ♔a6 (4...♖c4+ 5 ♖c5!) 5 ♖b6+! ♔a7 6 d5! ♖c4+ 7 ♖c6! ♖b4 8 d6 ♖b7+ 9 ♔d8 ♖b8+ 10 ♖c8 ♖b1 11 d7 ♔b7 12 ♔e8 1-0.

2) **2...♖b7** (preventing ♖b5+) and now:

2a) **3 ♖h5?** ♖b6! 4 ♔d7 ♖b7+! 5 ♔c6 ♖c7+! 6 ♔d6 ♖g7 (*ECE*'s continuation 6...♖c1? loses to 7 ♖b5+ ♔a7 8 d5) 7 ♖h6 (7 d5 ♖g6+ 8 ♔d7 ♖g7+! 9 ♔e6 ♖g6+ draws) ♔c8 8 d5 ♖d7+ 9 ♔e6 ♔c7 draws.

2b) **3 ♖d6?** *(D)* and now:



492a =/=

2b1) **3...♖b4** (*ECE* incorrectly gives this as losing) 4 d5 ♖d4! 5 ♔d7 (5 ♔e7 ♖h4 draws) ♔b7 6 ♔e6 ♖e4+ 7 ♔f5 ♖h4 draws easily.

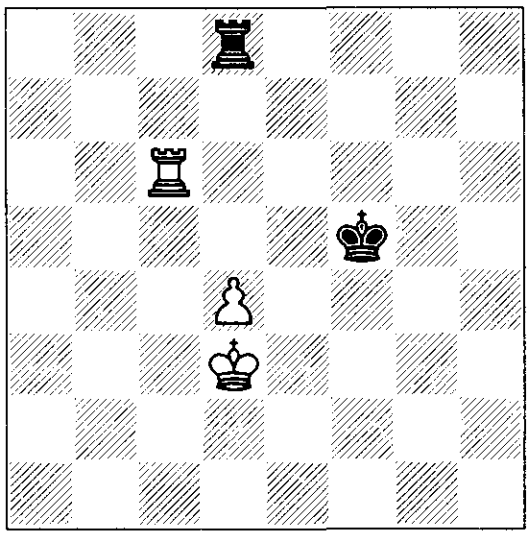
2b2) **3...♖b5** (*ECE* also thinks this loses!) 4 d5 ♔b7! 5 ♔e7 ♖b1 6 ♖h6 (6 ♖d7+ ♔b6! draws) ♖d1 7 d6 (7 ♔e6 ♔c7) ♔c6! draws.

2b3) **3...♖b1** (simplest) 4 d5 ♖d1! drawing as in line 2b1.

2c) **3 ♖e5!** ♖b6 (if the rook moves on the rank then ♖b5+ wins) 4 ♔d7! ♖b7+ 5 ♔c6! ♔a7 (5...♖c7+ 6 ♔d6 ♖h7, which drew in line 2a, fails here to 7 ♖e8+ and 8 ♖e7+) 6 d5! ♖b6+ 7 ♔c5! ♖b1 8 ♖e7+! ♔b8 9 ♔c6! ♖c1+ is diagram 469 after Black's fifth move.

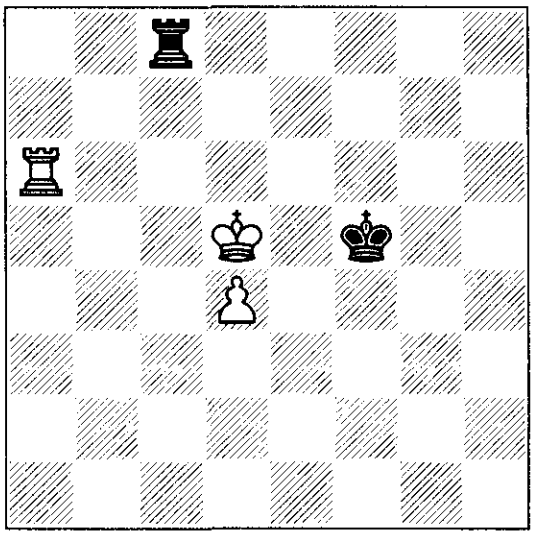
### 4.4.3: Black's king is cut off along a rank

First of all we consider the case with White's rook on the sixth rank.



493 +/=

*Chéron, 1944*



494 =/−

*Chéron, 1944*

(**493**): White to play wins by 1 ♔c4! ♖a8 (1...♔e4 2 ♖e6+! wins) 2 d5! ♖a4+ 3 ♔c5 winning as in line 2 of diagram 485. With Black to play the result is different from the many similar positions we have analysed, because Black can draw by an immediate sideways attack: 1...♖a8! 2 ♔c4 ♖a4+! 3 ♔c5 ♖a5+! 4 ♔b4 (4 ♔d6 ♔e4! wins the pawn) ♖a8 and White cannot make progress.

Diagram 493 becomes a draw if Black's king is moved to the short side of the pawn, in the sense that with B♔b5 and W♖e6, White to play cannot win.

(**494**): Chéron discovered this position of reciprocal zugzwang. Suppose Black is to play:

1) **1...♔f4** 2 ♔e6 ♖h8 3 ♖a5 ♖h6+ 4 ♔d7 ♖h7+ 5 ♔c6 ♖h6+ 6 ♔c5! ♖h8 (6...♔f5 7 d5) 7 d5 ♔e5 8 ♖a6! ♖c8+ 9 ♖c6! ♖e8 10 ♖c7 ♖a8 11 ♖e7+ wins.

2) **1...♖d8+** 2 ♔c5 ♖c8+ 3 ♖c6! ♖a8 4 d5! ♖a5+ winning as in line 2 of diagram 485.

3) **1...♖c1** 2 ♔d6 ♖h1 3 ♖a5+ ♔f6 4 d5 ♔f7 5 ♖a7+ ♔f6 6 ♖a2 ♔f7 7 ♔d7 wins.

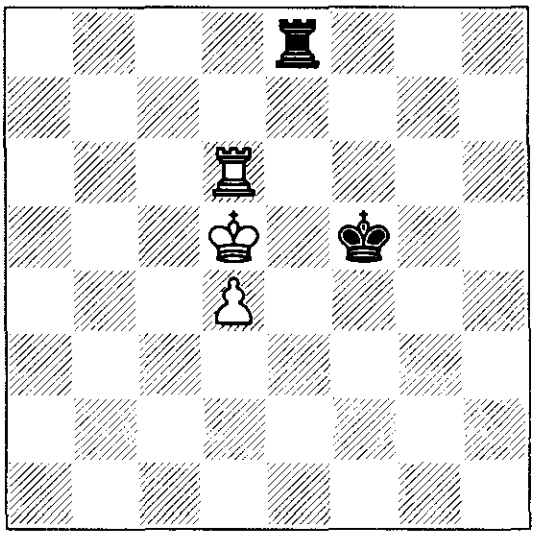
White to move can try:

1) **1 ♖b6** (1 ♔d6 ♔e4!) ♖a8! 2 ♔c5 (2 ♔c6 ♔e4 3 d5 ♔e5! 4 d6 ♔e6! 5 d7 ♔e7! draws) ♖a5+! 3 ♖b5 (or 3 ♔b4 ♖a8 4 d5 ♔e5) ♖a6 4 ♔d5 ♔f6 5 ♖b7 ♖a5+! 6 ♔d6 ♖a6+! 7 ♔c5 (7 ♔d7 ♖a5! 8 ♖b6+ ♔f5) ♖a5+! 8 ♔c6 (8 ♖b5 ♖a8) ♔e6! 9 ♖b6 ♖d5 with a clear draw.

2) **1 ♖c6** ♖a8! 2 ♔c5 (2 ♔d6 ♔e4!) ♖a5+! 3 ♔b4 ♖a8 4 ♔c4 ♖a4+! and White is going round in circles.

(**495**): White to play wins by 1 ♖d7! (other moves fail, for example 1 ♖a6? ♖c8!, 1 ♖b6? ♖a8! and 1 ♖c6? ♖a8! may be found in the previous diagram, while 1 ♔c5? ♖a8! 2 d5 ♖a5+! 3 ♔c6 ♖a6+! 4 ♔c7 ♖a5! 5 ♖d8 ♔e5 6 d6 ♖a7+ 7 ♔b6 ♖a1 is a clear draw) and now:

1) **1...♔f4** 2 ♔d6 ♖a8 3 d5! ♔e4 (3...♖a6+ 4 ♔c5!) 4 ♖h7! ♖a6+ 5 ♔c5! ♖a5+ 6 ♔c6! ♖a6+ 7 ♔b5! ♖d6



495 +/=

*Chéron, 1944*

8 ♔c4! ♔e5 9 ♖e7+ and Black's king gets cut off.

2) **1...♔f6** 2 ♔c6! ♖c8+ 3 ♖c7! ♖a8 4 d5 ♖a6+ 5 ♔c5 ♖a5+ 6 ♔d6 ♖a6+ 7 ♖c6 wins as in diagram 485.

3) **1...♖f8** (1...♖a8 2 ♖f7+! ♔g6 3 ♖f1 wins) 2 ♔d6 and now:

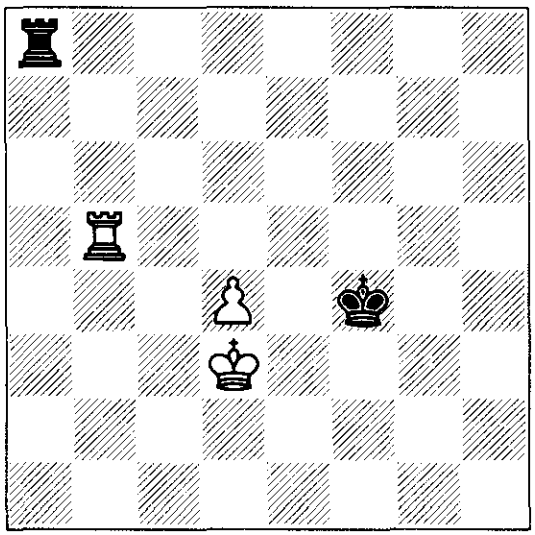
3a) **2...♔e4** 3 d5! ♔d4 (3...♖a8 4 ♖h7! wins as in line 1) 4 ♖h7 ♖d8+ (4...♖f6+ 5 ♔e7! ♖a6 6 d6) 5 ♔c6! ♖a8 (5...♖c8+ 6 ♔d7 ♖a8 7 ♖h5 wins) 6 ♖h5 ♖a5 7 ♔d6 ♖a6+ 8 ♔e7 ♖a7+ 9 ♔e6 ♖a5 10 ♖f5 followed by d6 and wins.

3b) **2...♖a8** 3 d5! (threat ♖e7) ♔f6 (3...♔e4 4 ♖h7! is line 1 again and 3...♖a6+ 4 ♔c5! ♖a5+ 5 ♔b6 ♖a1 6 ♖e7 wins by cutting off Black's king) 4 ♖c7 ♖a6+ (4...♖a1 5 ♔d7) 5 ♖c6 is diagram 485.

3c) **2...♖f6+** 3 ♔c5 ♖f8 (3...♖a6 4 d5 is line 3b) 4 d5 ♖c8+ (4...♔f6 5 d6 ♖e8 6 ♖h7) 5 ♔d6! ♔e4 (5...♖e8 6 ♖f7+ ♔g6 7 ♖f1) 6 ♖e7+ ♔d4 7 ♔d7 followed by d6 wins.

Black to play draws by 1...♖a8!.

White wins when his rook is on the fifth rank and Black's king is on the long side.



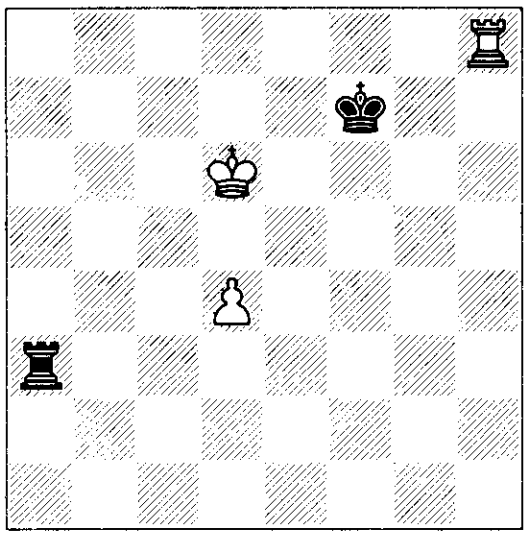
496 +/–

*Chéron, 1966 (version)*

**(496):** This may be regarded as the standard position. White wins, whoever moves first. We take Black to move: 1...♖a3+ (White wants his rook on the right-hand side of the pawn, because at the moment d5 allows ...♔e5, but first he must deal with Black's checks) 2 ♔c4! ♖a4+ 3 ♔c3 (3 ♔d5? ♔f5! and 3 ♔c5? ♔e4! 4 d5 ♔e5! are only draws) ♖a3+ (after 3...♖a8 4 ♖h5 White has made the first step) 4 ♔b4 ♖a8 5 ♖h5 (the immediate 5 ♖e5 is bad because of 5...♖b8+ 6 ♔c5 ♖c8+ and now 7 ♔b6? allows 7...♖c4! drawing) ♔g4 (5...♖b8+ 6 ♔c5 ♖c8+ 7 ♔b6 is similar to the main line) 6 ♖e5 ♖b8+ (or 6...♔f4 7 ♖e6 with an eventual d5) 7 ♔c5 ♖c8+ 8 ♔b6 ♔f4 9 ♖e6 (9 ♖h5 ♔g4 10 ♖c5 is also good) ♖d8 10 ♔c5! ♖c8+ 11 ♖c6 ♖a8 12 d5 and White has moved the position one rank up the board.

It is hardly necessary to add that if Black's king is on the short side then the position is drawn.

We finish with a practical example.



497 =/

**Salwe – Burn**

*St Petersburg, 1909*

(**497**): The game continued 1 ♖c8 ♖a6+? (Black had nine possible drawing moves, the simplest being 1...♖d3 2 d5 ♖d1 with a draw by diagram 472) and now:

1) **2 ♔d7!** ♖a5 (2...♖a7+ 3 ♖c7 transposes) 3 ♖c5! ♖a7+ (3...♖a4 4 d5! ♖a7+ 5 ♖c7 is easier) 4 ♖c7! ♖a5 5 ♔d6+! ♔f6 (5...♔e8 6 ♖c8+! ♔f7 7 d5 ♖a6+ 8 ♔d7 ♖a7+ 9 ♖c7 and 10 d6 wins) 6 d5 ♖a6+ 7 ♖c6 with a win by diagram 485.

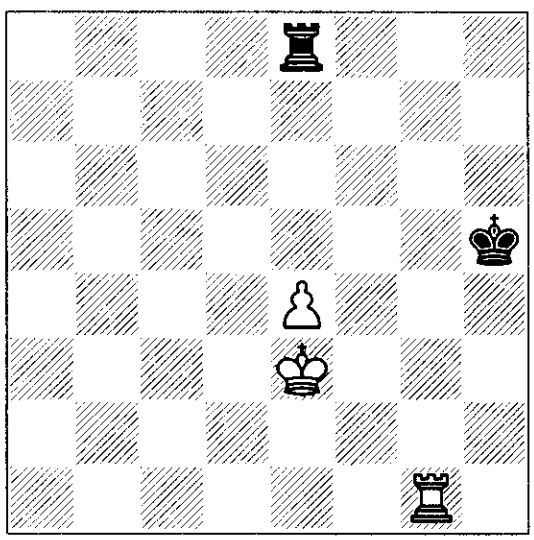
2) **2 ♖c6?** (as played by Salwe) with a branch:

2a) **2...♖a1** 3 d5 ♖d1! 4 ♖c7+ ♔e8! 5 ♖c8+ ♔f7 is diagram 472.

2b) **2...♖a8?** (*ECE* does not comment on this move, which gives White a winning position again) 3 ♖c7+? (a terrible move driving Black's king in front of the pawn; 3 ♔d7! ♖a5 4 ♖c5! would have transposed to line 1) ♔e8! 4 d5 ♔d8 5 ♖d7+ ♔e8 (*ECE* gives 5...♔c8 as drawing, although 6 ♔e7! wins by diagram 471) 6 ♖c7 ♔d8 7 ♖c6 ♖a7 (the rest of this ending isn't very interesting) 8 ♖b6 ♖d7+ 9 ♔c5 ♖c7+ 10 ♔d4 ♖a7 11 ♖h6 ♖g7 12 ♖a6 ♖b7 13 ♖a1 ♔d7 14 ♔e5 ♖b6 15 ♖a7+ ♔d8 16 ♔d4 ♖h6 17 ♔c5 ♖g6 18 ♖b7 ♖h6 19 ♖b8+ ♔d7 20 ♖g8 ½-½.

## 4.4.4: Black's king is cut off along a file

The main result is that a two-file cut-off is decisive, regardless of whether Black's king is on the short side or the long side. However the two cases require completely different winning plans by White. When Black's king is on the short side White can use mating threats, while on the long side White need not fear sideways checks.



498 +/–

*Chéron, 1926*

**(498):** This is the key position when the king is on the short side. First of all, suppose Black is to move:

1) **1...♔h6** 2 ♔d4 ♖d8+ 3 ♔c5 ♖e8 4 ♔d5 ♖d8+ 5 ♔e6 ♖e8+ 6 ♔f6 ♖f8+ 7 ♔e7 followed by e5 and wins.

2) **1...♔h4** 2 e5 ♔h5 3 ♔e4 ♔h6 4 ♔d5 ♖d8+ 5 ♔c6 ♖e8 6 ♔d6 ♖d8+ 7 ♔e7 wins.

3) **1...♖e7** 2 ♔d4 ♖d7+ 3 ♔c5 ♖e7 4 ♔d5 ♖d7+ 5 ♔e6 ♖d2 6 e5 and wins.

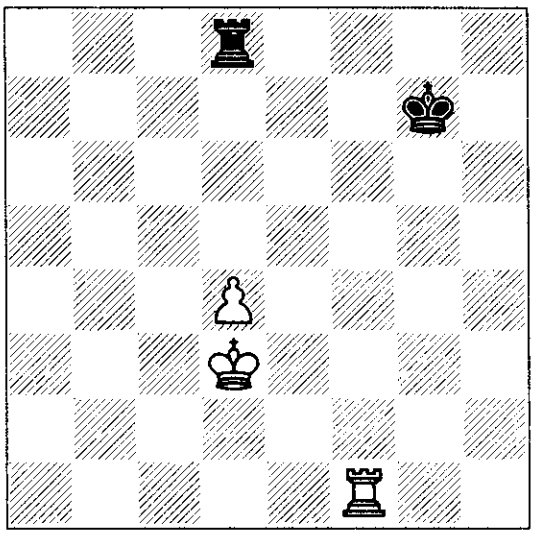
4) **1...♖a8** 2 e5 ♖a4 3 e6 ♖a6 (or 3...♔h6 4 e7 ♖a8 5 ♔f4 ♖e8 6 ♔f5 ♖xe7 7 ♔f6!) 4 ♔f4 ♖xe6 5 ♔f5! and wins.

Surprisingly, the win is more complicated when White is to move. The best method is to pass the move to Black by 1 ♖g2 ♔h4 2 ♖g7 (2 e5? ♖xe5+! 3 ♔f4 ♔h3! draws) ♔h3 (after 2...♔h5 3 ♖g1 White achieves his objective) 3 ♖g1 ♔h2 (3...♔h4 4 e5 as in line 2 above) 4 ♖g5 ♔h3 5 e5 ♔h4 6 ♖g1 again transposing to line 2.

If Black's king starts on h6 then White wins as in line 1 above and if it starts on h7 then White plays as in line 1 but with 6 ♔f7 instead of 6 ♔f6.

**(499):** We assume that Black is to play: 1...♔g6 2 ♔c4 ♖c8+ 3 ♔b5 ♖d8 (3...♖b8+ 4 ♔c6 forces an immediate d5) 4 ♖d1 ♔f6 5 ♔c6! ♖a8 (5...♔e7 6 ♖e1+! followed by d5) 6 ♖e1! ♖a6+ 7 ♔b5 ♖d6 8 ♔c5 ♖d8 9 d5! wins by diagram 481. The same method works wherever Black's king is on the g-file.

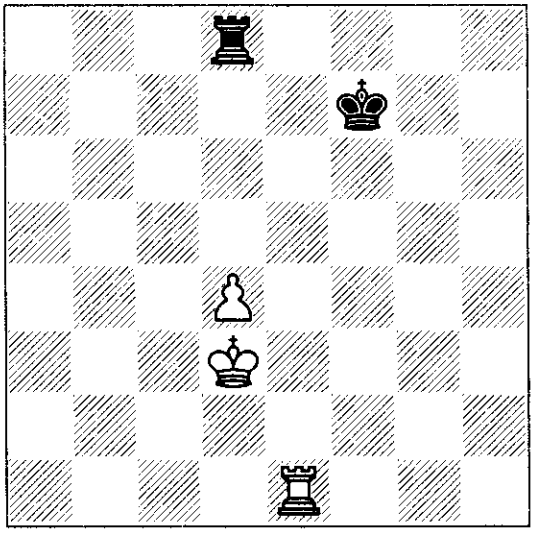
If Black's king is cut off by just one file, then White only has winning chances if Black's king is on the long side, and then only if Black's pieces



499 +/–

*ECE, 1985*

are badly placed. The results are very similar to those from diagrams 377 and 378.



500 +/=

*ECE, 1985*

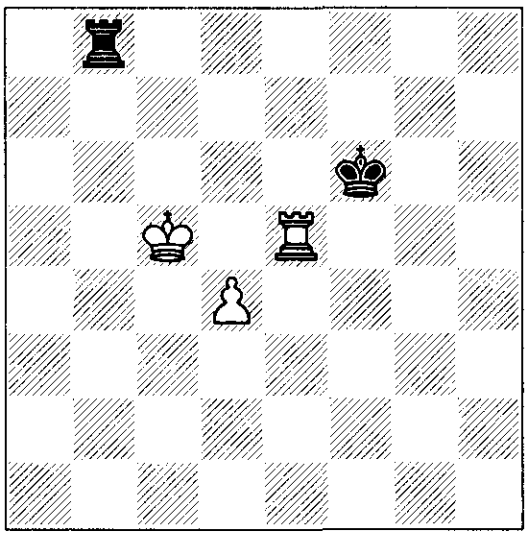
**(500):** Although the result is the same as in diagram 377, there is a slight difference in the analysis. White to play wins by 1 ♔c4! ♖c8+ 2 ♔b5 ♖d8 3 ♔c5 (with the c-pawn, White could play the equivalent of 3 ♖e4, but here 3...♔f6 4 ♔c6 ♔f5! 5 ♖h4 ♔g5

draws because White's rook doesn't have enough room on the rank) ♖c8+ 4 ♔b6 ♖d8 5 ♖e4 ♖b8+ (5...♔f6 6 ♔c7! ♖d5 7 ♔c6! followed by d5) 6 ♔c7 ♖b4 7 ♔c6 ♔f6 8 ♔c5 ♖a4 9 ♔b5 ♖a8 10 d5 and wins.

Black to play draws by 1...♖e8.

The result is unchanged if Black's rook starts on a8, b8, g8 or h8. However, if the rook is on c8 then the position is drawn with either player to move because 1 ♔c4 is impossible.

If Black's king is on f6, then White's winning chances are practically zero.



501 =/=

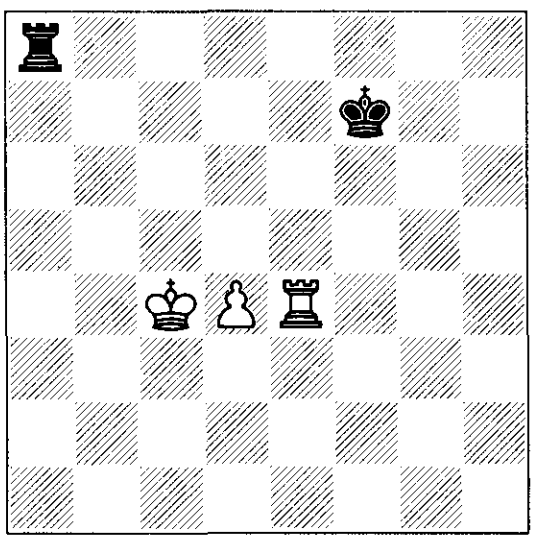
*Original*

(**501**): Even diagram 378 shifted to the right turns into a draw. The main line runs 1 ♖e4 ♔f5! (1...♖c8+? 2 ♔d6! ♔f5 3 ♖e5+! wins after 3...♔f6 4 ♖e6+ followed by 5 d5, or 3...♔f4 4 ♖e6 ♖d8+ 5 ♔c5 ♖c8+ 6 ♖c6 followed by d5) 2 ♖h4 ♖c8+! (2...♔g5 3 ♖h7! ♖c8+ 4 ♔d6! ♔f6 5 d5 wins) 3 ♔d6 ♖c4! (now we see the distinction between diagram 378 and this position; White's rook is one file closer to Black's king, so 4 ♖h5+ ♔g6 5 ♖d5 ♔f7 6 ♔d7 ♔f6 is an easy draw) 4 ♔d5 and now:

1) **4...♖a4?** 5 ♖h8! (occupation of the eighth rank is crucial; after 5 ♖h7? ♖a5+! 6 ♔c6 ♖a6+ 7 ♔b5 ♖a8! 8 ♖e7 ♔f6 9 ♖e4 ♔f5 10 ♖e1 ♖d8! or 5 ♖h1? ♖a5+! 6 ♔c6 ♖a6+! 7 ♔b5 ♖a8! 8 ♖e1 ♖d8! 9 ♔c5 ♖c8+! Black draws) ♖a5+ (5...♔f6 6 ♖e8! ♔f7 7 ♖e1 ♖a8 8 ♔c6 ♖a6+ 9 ♔b5 and White wins because d5 cannot be stopped) 6 ♔c6 ♖a6+ 7 ♔b5 ♖a7 8 ♖e8 ♖d7 9 ♔c5 ♖c7+ (the seventh rank is too close to White's king) 10 ♔d6 followed by d5 winning.

2) **4...♖c8!** 5 ♖h6 (5 ♖h7 ♖d8+ 6 ♔c5 ♔e6 draws) ♖a8! drawing as in diagram 494.

In the following position the result depends on who moves first, because Black to play can transfer his king to the safe square f6.



502 +/=

*Chéron, 1944*

(**502**): White to move continues 1 ♔c5 (threat d5) ♖c8+ 2 ♔b6 ♖b8+

(or 2...♖d8 3 ♔c7) 3 ♔c7 ♖b4 4 ♔c6, winning as in the previous diagram. Black to play draws by 1...♔f6! (2 d5 is not a threat at the moment) 2 ♔c5 ♔f5! 3 ♖h4 and now 3...♖c8+ draws as in the previous diagram, although with the rook on a8 Black can draw more simply by 3...♖a5+.

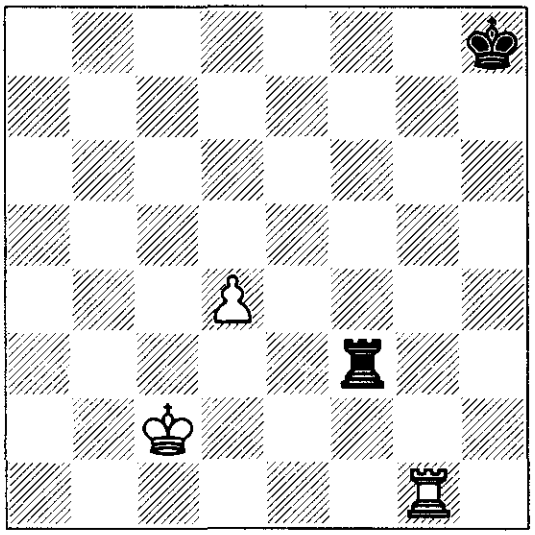
If Black's rook starts on b8, d8, g8 or h8 then White wins even if Black moves first because 1...♔f6 may be met by 2 d5!.

If Black's king is on f5 the result is again a draw, but with Black's king on f4 and White's rook on the e-file, White to play wins by 1 ♖e5, cutting the king off along a rank.

We now consider the situation in which Black's king is cut off along a file, but White's king is cut off along the third rank. White needs to cut off Black's king by three files to have any winning chances, but even this doesn't guarantee victory. We suppose that White has a pawn on d4 and rook on g1, and Black has a king on the h-file and a rook on the third rank.

We start with the case of Black's king on h8.

**(503):** If White's king is on c2 then White to play wins and Black to play draws, regardless of where Black's rook is on the third rank. In the diagram 1 d5! ♖f5 (1...♔h7 2 d6! ♖f8 3 ♔c3 ♖d8 4 ♖d1! ♔g6 5 ♔c4 ♔f7 6 ♔c5 is winning after 6...♖a8 7 ♖e1 or 6...♔e6 7 ♖e1+! ♔d7 8 ♖e7+! ♔c8 9 ♔c6) 2 d6! ♖c5+ 3 ♔b3! ♖d5 4 ♖g6! ♔h7 5 ♔c4 ♖d1 6 ♖e6 ♔g7 7 ♔c5 ♔f7 8 ♖e2 wins. Black to play draws by 1...♔h7! 2 d5 ♖f5! 3 ♖d1 (3 d6 ♖c5+!) ♔g7 4 d6 ♖f8! 5 ♔c3 ♔f7 6 ♖f1+ ♔g7.

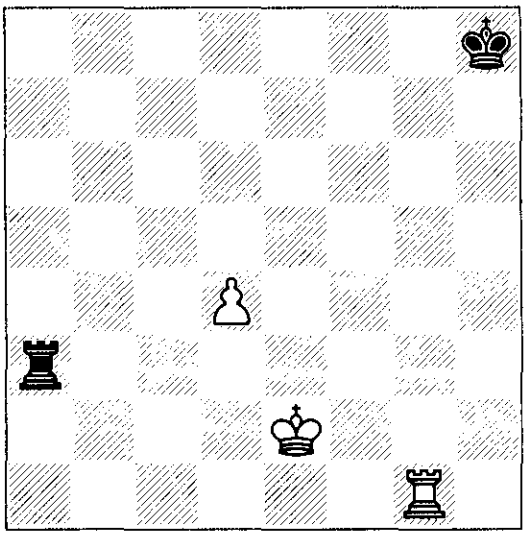


503 +/=

*Chéron, 1944*

When Black's rook starts on a3 the Black to move analysis is slightly different: 1...♔h7! 2 d5 (or 2 ♖d1 ♔g6 3 ♖d3 ♖a8 4 ♖f3 ♖a4! 5 d5 ♖d4 drawing) ♖a5! 3 ♖g5 ♖a3! (if 3...♔h6? then 4 ♖e5! ♔g6 5 ♔b3!, preventing ...♖a4, wins after 5...♔f6 6 ♖e6+! followed by 7 ♔c4!) 4 d6 ♖a8! 5 ♔b3 ♖d8! 6 ♖d5 ♔g7 7 ♔c4 ♔f6 and the white rook blocks d5, so Black draws.

**(504):** With the king on e2, Black to move always draws. White to play wins when Black's rook starts on a3, b3 or c3, but draws if the rook starts on h3. In the diagram 1 d5! ♖a5 (1...♔h7 2 d6! ♖a6 3 ♖d1! ♖a8 4 ♔d3 ♔g6 5 ♔d4! ♔f7 6 ♖e1! ♖e8 7 ♖e5! ♖a8 8 ♖e7+ ♔f6 9 ♖e1 wins) 2 ♖g5! (2 d6? ♖e5+! 3 ♔f3 ♖d5! 4 ♖g6 ♔h7 5 ♔e4 ♖d1 6 ♖e6 ♔g7 7 ♔e5 ♔f8! and White has nothing better than 8 ♖e7 ♖e1+! 9 ♔f6 ♖xe7! drawing) ♔h7 3 ♔d3 ♔h6 4 ♖e5 ♔g6 5 ♔c4 ♔f6 6 ♖e1 is a simple win for White.



504 +/=

*Chéron, 1944*

Black to play draws comfortably by 1...♔h7 2 d5 ♖a5! 3 ♖d1 (3 ♖g5 ♔h6) ♔g7 4 d6 ♖a8 5 ♔d3 ♔f7. However, 1...♖h3 also draws, for example 2 d5 ♖h5! 3 ♖d1 (3 d6 ♖e5+! 4 ♔f3 ♖d5! transposes to the 2 d6? note in the White to play analysis) ♔g7 4 d6 ♖h8 5 ♔d3 ♔f6 6 ♔c4 ♔e6.

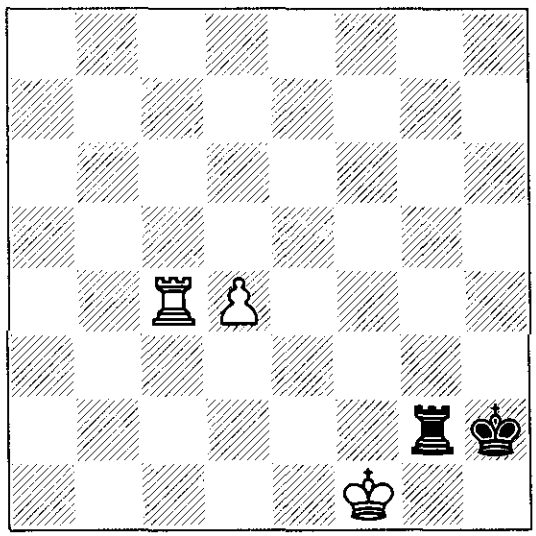
Now suppose that White's king starts on d2. If Black's rook is on b3, then White to play wins because 1 ♔c2! leads to diagram 503. The position is drawn if Black's rook is on any other square on the third rank, for example with B♖f3 the move 1 ♔e2 is met by 1...♖h3!.

When Black's king is on h7 or h6, all positions are drawn. When the king is on h5, White can only win if Black's rook starts on h3, and then White to play wins if his king is on c2 or e2. The reason is that Black's king obstructs the rook and White wins by 1 d5!, but we have no space for the details.

When Black's king is on h4 the result depends on who moves first. Suppose White's king is on c2. Then White to play wins by 1 d5! ♖a5 2 d6!, while Black to play draws by 1...♔h5!. This applies whether Black's rook starts on a3, e3 or f3. When Black's rook starts on h3 White wins even with Black to move. The results are the same when White's king starts on e2. Finally, with White's king on d2 he wins with the move only if Black's rook is on b3 (1 ♔c2!) or h3. Black to play draws by 1...♔h5 or 1...♖a3.

### 4.4.5: Other situations

We finish with two positions of reciprocal zugzwang.



505 =/–

*Original*

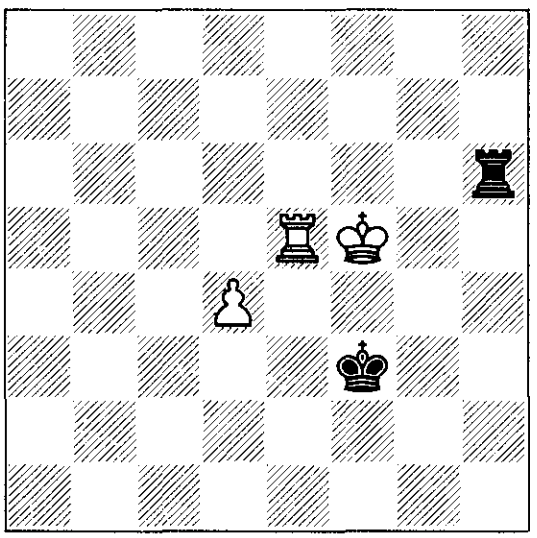
**(505):** This is another member of the large family of similar reciprocal zugzwang positions which includes diagrams 227, 270, 297 and 408. With Black to move:

1) **1...♖g4** 2 ♔e2 ♔h3 (2...♔g3 3 ♔d3 ♖g5 4 ♖c5 and Black's king is cut off along a rank) 3 ♔d3 ♖g3+ 4

♔e4! ♖g4+ (4...♔h4 5 d5 ♔g5 6 d6 ♔f6 7 ♔d5! ♖d3+ 8 ♔c6! ♔e6 9 ♖e4+! and wins) 5 ♔d5 ♖g8 (5...♔h4 6 ♔c5 and 7 d5) 6 ♔e6 ♖g6+ 7 ♔f5 ♖d6 8 ♔e5 followed by d5 wins.

2) **1...♖a2** (1...♔g3 2 ♖c3+! ♔h2 3 ♖d3 wins) 2 ♔e1! (threat d5) ♔g3 (or 2...♖a5 3 ♖c3 ♖d5 4 ♖d3! followed by advancing the king) 3 d5! ♔f3 4 d6! ♔e3 (4...♖e2+ 5 ♔d1! and now 5...♖e8 6 ♔d2! followed by ♖d4, or 5...♖e6 6 ♖d4! followed by ♔d2) 5 ♖c3+! ♔d4 6 d7! ♖a8 7 ♖c8! and wins.

Now suppose White is to play. Line 2 above is crucial, as it shows why White to play cannot win with 1 ♖a4 or 1 ♖b4, e.g. 1 ♖a4 (1 ♔e1 ♔g3! 2 d5 ♔f3! 3 d6 ♖g6 and now 4 ♖d4? loses to 4...♔e3! so the position is a draw; 1 ♖b4 ♖a2! is similar to the main line) ♖b2! 2 ♔e1 ♔g3! 3 d5 ♔f3! 4 d6 ♔e3! 5 ♖a3+ ♔e4 6 d7 ♖b8 draws.



506 =/–

*Original*

(**506**): With Black to play:

1) **1...♖h5+** 2 ♔e6 ♖h6+ 3 ♔d7 ♔f4 (3...♖h7+ 4 ♔d6 ♖h6+ 5 ♖e6) 4 ♖e1 ♖h5 5 ♔d6 ♖h6+ 6 ♔c5 followed by d5 and White has kept Black's king cut off.

2) **1...♖a6** (1...♔g3 2 d5 wins after 2...♔f3 3 ♖e1 ♖d6 4 ♔e5 ♖d8 5 ♖f1+ ♔e2 6 ♖f6, followed by d6, or 2...♖d6 3 ♔e4 ♔g4 4 ♖e6 followed by d6) 2 ♖b5 ♔e3 (2...♖h6 3 d5) 3 ♔e5 ♔d3 (3...♖h6 4 ♖b3+) 4 d5 ♔c4 (4...♖h6 5 ♖b4) 5 ♖b1 ♔c5 (5...♖h6 6 d6) 6 ♖c1+ and 7 d6 wins.

With White to play:

1) **1 d5** (1 ♔g5 ♖d6 2 d5 is the same) ♖d6! (this is the reciprocal zugzwang mentioned in diagram 486) 2 ♔g5 ♖a6 3 ♖e6 (or anywhere else on the e-file) ♖a5 drawing.

2) **1 ♖e7** ♖h5+! 2 ♔e6 (2 ♔f6 ♖d5!) ♔e4 3 ♖d7 ♖h6+ followed by exchanging rooks.

3) **1 ♖e1** ♖h8! (preventing White's king moving to the e-file) 2 d5 (2 ♔f6 ♖d8!) ♖d8! 3 ♖d1 (3 ♖e5 ♖d6! is line 1) ♔e2! 4 ♖d4 ♔e3! with a perpetual attack on the rook.

4) **1 ♖c5** ♔e3! 2 ♔e5 ♖h5+! 3 ♔d6 ♖h6+! 4 ♔d5 ♔d3! draws easily.

There are four reciprocal zugzwangs in the ending of ♖+♙d4 v ♖. Three are diagrams 494, 505 and 506. The last is given after diagram 489.

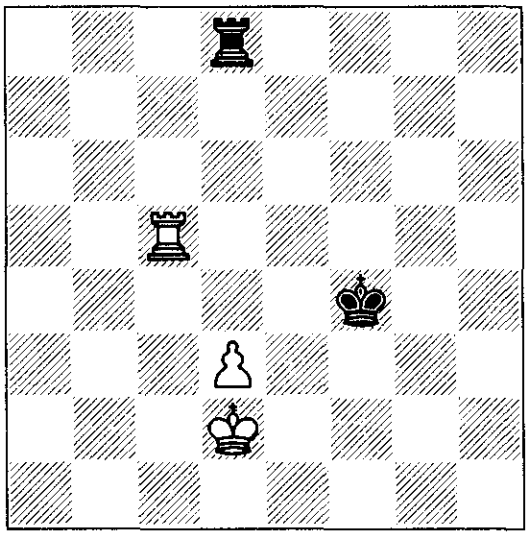
**Practical tips:** The most important positions are those in which Black's king is cut off along a file, so over-the-board players should pay particular attention to diagrams 498-500. It is also useful to know when White can win by cutting off Black's king along a rank, so diagrams 493, 494 and 496 are useful.

# 4.5: Pawn on the third rank

4.5.1: Black's king is cut off along a rank 303
4.5.2: Black's king is cut off along a file 305
4.5.3: Other situations 309

## 4.5.1: Black's king is cut off along a rank

First of all we take the case in which White's rook occupies fifth rank.



507 +/=

*Chéron, 1944*

(**507**): We have examined many positions of this type in the book, and the results here parallel those from diagram 493. With White to play, 1 ♔c3! and now:

1) 1...♔e3 2 ♖e5+! ♔f4 3 d4 (here Chéron comments that the threat is 4 ♖e6, but in fact if White were to play then 4 ♖e6? would only draw after 4...♔f5! 5 ♖c6 ♔e4) ♖c8+ (3...♖a8 4 ♖e6 now wins after 4...♔f5 5 d5! ♖a4 6 ♖e8 ♔f6 7 d6! ♖a7 8 ♔c4 or 4...♖c8+ 5 ♔b4 ♖b8+ 6 ♔c5 ♖c8+ 7 ♖c6 ♖a8 8 d5 ♖a5+ 9 ♔d6) 4 ♔d3 ♖d8 (4...♖a8 5 ♖e7 wins as in the last bracket) 5 ♖h5 (threat d5) ♖e8 (5...♔g4 6 ♖c5 wins as in diagram 496) 6 ♔c4 (not 6 d5? ♖e5!) ♖c8+ 7 ♔d5 ♖d8+ 8 ♔c5 ♖c8+ 9 ♔b6 ♔g4 (9...♖d8 10 d5 ♔g4 11 ♔c7!) 10 ♖c5 ♖h8 11 d5 ♔f5 12 ♔c7 ♖h7+ 13 ♔c6 ♖a7 14 ♖c1 ♖a6+ 15 ♔b5 ♖d6 16 ♔c5 and wins.

2) **1...♖a8** 2 d4! ♖a3+ (2...♖a4 3 ♖h5 ♔e4 4 d5 ♖a6 5 ♔c4 wins) 3 ♔b4 ♖a8 4 ♖h5 ♖b8+ 5 ♔c5 wins as in line 1.

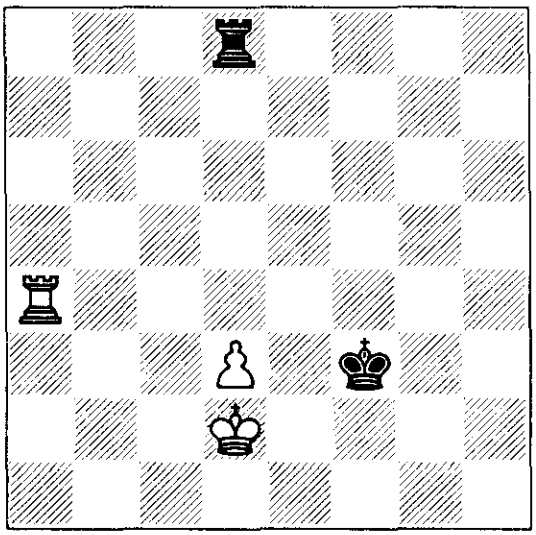
Black to play can draw by organizing an immediate sideways attack with 1...♖a8! 2 ♔c3 ♖a3+! 3 ♔c4 ♖a4+! 4 ♔b3 ♖a8 and White is unable to make progress.

Now move White's rook to a5 in the initial position. The result is a draw, even with White to play: 1 ♔c3 (1 ♖c5 ♖a8!, as above) ♖c8+! 2 ♔d4 ♖c7! (2...♖d8+? 3 ♔c4! ♖c8+ 4 ♖c5! ♖a8 5 d4! and wins) 3 ♖c5 (3 ♔d5 ♔e3!) ♖a7! 4 ♔c4 (there is nothing better) ♖a4+! 5 ♔b3 ♖a8 draws as before.

When Black's king is on the long side all such positions are drawn, even with White to move.

Now suppose that White's rook is on the fourth rank. This situation is much more complex

(**508**): White to play wins if his rook starts on a4, c4, e4 or h4, but the position is drawn if his rook starts on b4 or g4.



508 +/=

*Original*

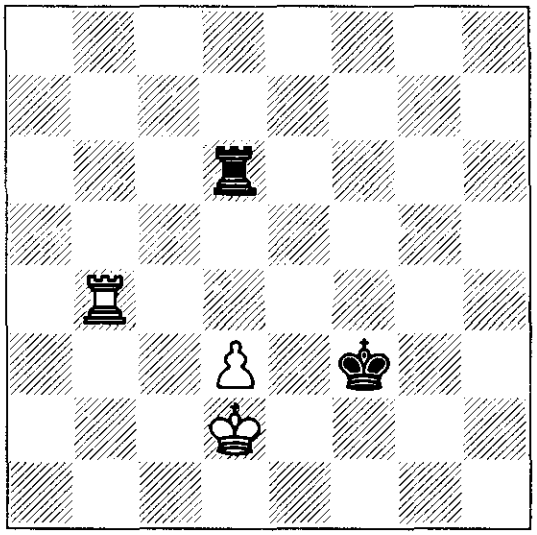
Taking the diagram position first, White to play continues 1 ♔c3! ♖c8+ 2 ♖c4! ♖a8 3 ♖c5! ♖a3+ 4 ♔c4! (we saw above that Black draws with his king on f4) ♖a4+ 5 ♔b3 ♖a8 6 ♖e5 (here White wins because Black does not control e5) ♖d8 (after 6...♔f4 7 d4!, for example, White wins as in diagram 496) 7 ♔c4 ♖c8+ 8 ♖c5 ♖a8 9 d4 winning as in the previous diagram.

Black to play draws by 1...♖c8, but it is worth noting that Black can also draw by 1...♖d5 (but not 1...♖d6? or 1...♖d7?) 2 ♔c3 ♖c5+! 3 ♖c4 ♖a5! and, thanks to the position of Black's rook, White cannot play the winning move ♖c5.

Now suppose that White's rook is on b4. Then 1 ♔c3 only draws after 1...♖a8! 2 ♖b5 ♖c8+! 3 ♔d4 ♔f4 4 ♖c5 ♖a8! 5 ♔c4 ♖a4+! 6 ♔b3 ♖a8 with a familiar draw.

When the rook is on c4 White can win by 1 ♔c3 ♖a8 2 ♖c5! or 1 ♖c5 ♖a8 2 ♔c3!, transposing to the previous diagram.

With the rook on h4 White wins most simply by 1 d4 ♔g3 2 ♖e4!.



509 +/=

*Original*

**(509):** This position is exceptional. White to play wins, but if Black's rook starts on d8, d7 or d5 the position is drawn. Suppose White is to play. After 1 ♔c3! ♖a6 (we saw above that if the rook starts on d8 then 1...♖a8! draws; we will see below why, if the rook starts on d7 or d5, 1...♖a7! or 1...♖a5 also draw) 2 ♖b5! (this isn't possible when Black's rook is on a5) ♖c6+ 3 ♔d4! Black may try:

1) **3...♔e2** 4 ♖b2+! ♔f3 5 ♖b8! (this is the key idea; after 5 ♔d5? ♖c8! Black gains extra checking distance) ♖c7 6 ♔e5! (6 ♖e8? ♖d7+! and 6 ♖f8+? ♔e2! are draws) ♖h7 (the sideways attack proves most awkward; 6...♖e7+ 7 ♔d6! ♖a7 8 ♖e8! ♖a4 9 ♔c5 ♖a5+ 10 ♔b4 ♖d5 11 ♔c4 followed by d4 wins) 7 ♖b4! (this move is the only way to meet the threat of ...♔e3 followed by ...♖h5+) ♖h5+ (7...♔e3 8 d4! ♖h5+ 9 ♔d6 wins) 8

♔e6 ♖h6+ 9 ♔d5 ♖h5+ (9...♖h8 10 d4! wins) 10 ♔c4 ♖a5 (10...♖h8 11 ♖b5 wins) 11 ♖b5! ♖a4+ 12 ♔b3 ♖a8 13 ♖e5 transposes to the previous diagram.

2) **3...♔f4** 4 ♖b8! (4 ♔d5? ♖a6 5 d4 ♔f5! and 4 ♖c5? ♖a6! only draw) ♖d6+ (after 4...♔f5 5 ♔d5! we see that Black's rook is too close to White's king; this line draws if Black's rook starts on d7) 5 ♔c4! ♔f5 6 ♖e8 ♔f6 (Black is trying to displace White's rook from the important back rank) 7 d4! ♔f7 8 ♖e4 ♖d8 9 ♔c5 ♖c8+ 10 ♔b6 ♖b8+ 11 ♔c7 ♖b4 12 ♔c6 ♔f6 13 ♔c5 ♖a4 14 ♔b5 and the pawn advances.

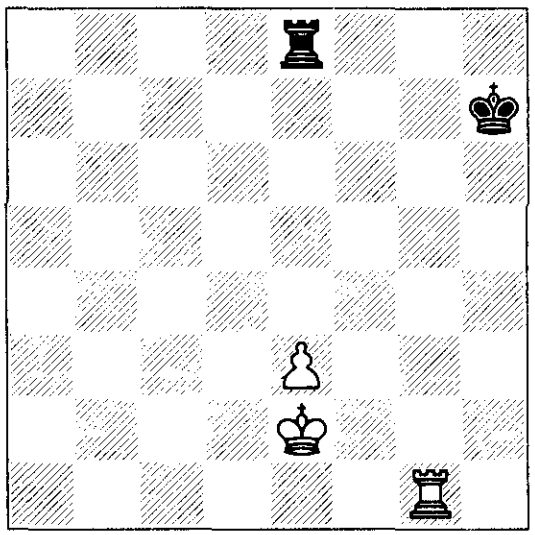
3) **3...♖c8** (3...♖d6+ 4 ♔c4 ♖c6+ 5 ♖c5 and 6 d4 wins easily) 4 ♖c5! ♖a8 5 ♔c4 ♖a4+ 6 ♔b3 ♖a8 7 ♖e5 and we transpose to the previous diagram.

Black to play can draw by 1...♖d5, 1...♖d7 or 1...♖d8, as described above, but 1...♖c6 and 1...♖a6 also draw.

### 4.5.2: Black's king is cut off along a file

This is the most interesting situation. We first cover the case in which Black's king is on the short side. When he is cut off by two files the result is normally a draw, but White can win if Black's king is badly placed.

**(510):** Black's king is poorly placed on h7 and this enables White to win if he has the move: 1 ♔d3 ♖d8+ 2 ♔c4 ♖e8 3 ♖g3 ♔h6 (Black uses the spare tempo to improve his king position, but it is not enough) 4 ♔d5 ♖d8+ 5 ♔e6 ♔h5 (5...♖e8+ 6 ♔f7 ♖e4 7 ♔f6!



510 +/=

*ECE, 1985*

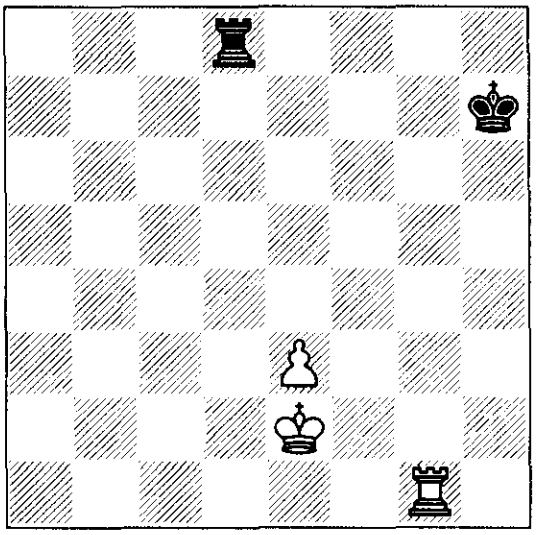
wins after 7...♖h4 8 e4 or 7...♔h7 8 ♔f5 followed by e4) 6 e4! ♖e8+ 7 ♔d5 ♖d8+ 8 ♔c5 ♖e8 9 ♔d4 ♖d8+ 10 ♔e3 winning by section 4.4.4.

However Black to play draws by 1...♔h6! 2 ♔d3 ♖d8+! (2...♔h5? 3 e4! wins) 3 ♔c4 ♖e8 4 ♔d4 ♖d8+! 5 ♔e5 ♖e8+! 6 ♔f6 ♔h5! (6...♖f8+? 7 ♔e7! wins after 7...♖f5 8 e4 or 7...♖f3 8 e4! ♖e3 9 ♔f6!) 7 ♖e1 ♖f8+! 8 ♔e7 ♖a8! 9 e4 (9 ♖g1 ♖a3! 10 e4 ♖e3! draws) ♔g5! 10 e5 ♖a7+ 11 ♔d6 ♖a6+ 12 ♔d7 ♖a7+ 13 ♔c6 ♖a6+ draws.

The situation is more interesting if Black's rook starts on d8.

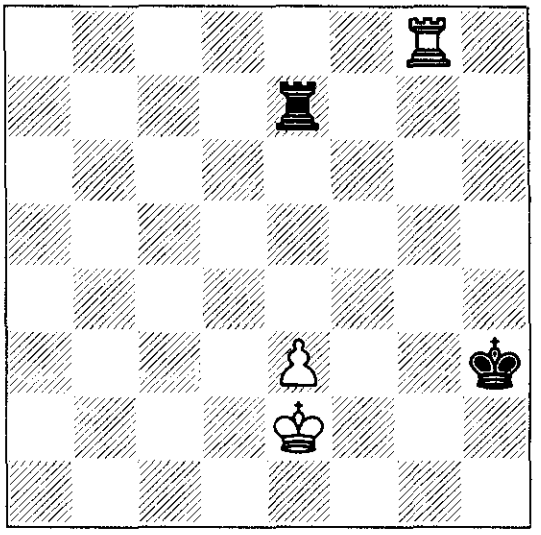
**(511):** The win is more difficult with White to play, because the immediate 1 ♔f3 ♖f8+ 2 ♔e4? (2 ♔e2! still wins) ♔h6! 3 ♖g3 ♔h5! is only a draw, while 1 e4? ♖g8! is just as bad. It turns out that Black's pieces are already on their best defensive squares and White can only win by 1 ♖g2! putting Black in zugzwang, and now:

1) **1...♔h8** (1...♔h6 2 e4!) 2 ♔f3 ♔h7 3 ♖g3 ♖f8+ 4 ♔e4 (White has



511 +/–

*Original*



512 =/–

*Original*

transferred his rook to g3 with gain of tempo, and now he wins) ♔h6 5 ♔d5 ♖d8+ 6 ♔e6 and wins as in the previous diagram.

2) **1...♖d7** 2 ♔f3 ♔h6 (2...♖d8 3 ♖g3 as in line 1) 3 ♔f4 ♖f7+ 4 ♔e5! and Black cannot play 4...♖e7+ because his rook is too close and 5 ♔f6 wins.

3) **1...♖a8** 2 ♔d3! ♖a3+ (2...♖d8+ is diagram 510 again) 3 ♔d4 ♖a4+ 4 ♔e5 ♖a5+ 5 ♔f4 followed by e4.

Suppose now that Black's rook is on e8 and his king on h6. Then White only wins if his rook starts on g3 and it is his turn to move, when 1 ♔d3! ♖d8+ 2 ♔c4 ♖e8 3 ♔d5 transposes to diagram 510. If Black's king starts on h5, h4 or h3 then the position is always a draw.

White's chances are greatly improved if his rook occupies the eighth rank, reducing Black's checking distance.

**(512):** This is reciprocal zugzwang. Black's possibilities are:

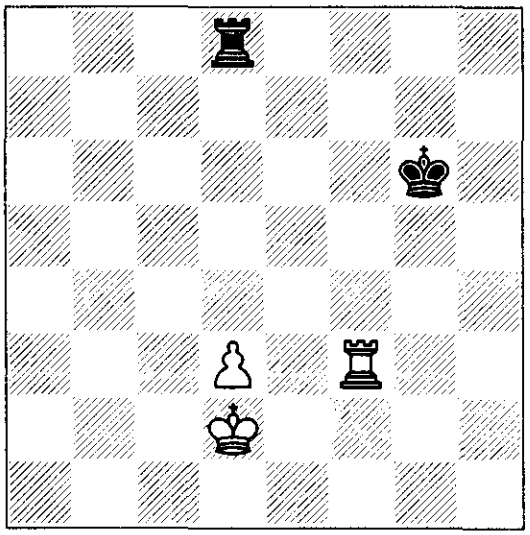
1) **1...♔h2** 2 ♖g5 ♔h3 3 ♔d3 ♖d7+ (3...♔h4 4 ♖g8 is line 2) 4 ♔e4 ♖d8 (4...♖f7 5 ♔e5 ♖e7+ 6 ♔f4 ♔h4 7 ♖g8 ♖f7+ 8 ♔e5 ♖e7+ 9 ♔f5! forces e4) 5 ♔f4! ♔h4 6 e4 ♖f8+ 7 ♖f5! ♖a8 8 ♖f6 ♔h5 9 e5 and wins.

2) **1...♔h4** (the king is badly placed here for tactical reasons) 2 ♔d3 ♖d7+ 3 ♔c4 ♖e7 4 ♔d4 ♖d7+ 5 ♔e5 ♖e7+ 6 ♔f5! and White can play e4, just as in line 1.

3) **1...♖e6** 2 ♔d3 ♖d6+ 3 ♔c4 ♖e6 4 ♔d4 ♖d6+ 5 ♔e5 followed by e4.

White to play cannot lose a move, for example 1 ♔f2 (1 ♖g1 ♖e8) ♖f7+! 2 ♔e1 ♖a7 3 ♔e2 ♖e7!, while after 1 ♔f3 ♖f7+! 2 ♔e4 ♖e7+! 3 ♔f4 ♖f7+! White can only return to e2.

Now suppose that Black's king is on the long side. White always wins when Black's king is cut off by three files, for example with W♔d2, ♖g1, ♙d3 v B♔h6, ♖d8 White to play wins by 1 ♔c3 ♖c8+ 2 ♔b4 ♖b8+ 3 ♔c4 ♖c8+ 4 ♔b5 ♖d8 5 ♖d1 ♔g6 6 d4 ♔f6 7 ♔c6! reaching diagram 499.



513 =/

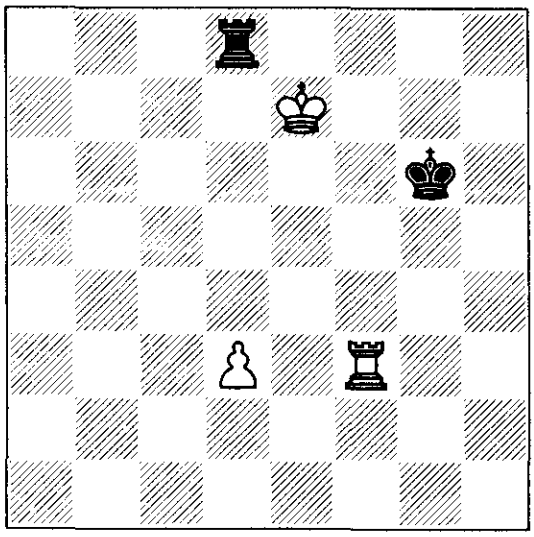
*Chéron, 1926 and 1954*

When Black's king is cut off by two files the general result is a draw, but White can sometimes win when the king is badly placed.

**(513):** This shows the dividing line. The diagram position is a draw, but White to play wins if Black's king starts on g7. We take the diagram position first: 1 ♔c3 ♖c8+ 2 ♔b4 ♖b8+ 3 ♔c5 ♖c8+! 4 ♔d6 ♖d8+! with the following lines:

1) **5 ♔e6** ♔g5 6 ♖f5+ ♔g6 7 ♖d5 ♖e8+! 8 ♔d7 (8 ♔d6 ♔f6 9 d4 ♖d8+ 10 ♔c6 ♖c8+ 11 ♔d7 ♖c4! 12 ♖d6+ ♔f5 draws) ♖e3! (not 8...♔f7? 9 ♖f5+! ♔g6 10 ♖f3 ♖e5 11 ♔d6 followed by d4, nor 8...♖a8? 9 d4! ♔f6 10 ♖c5! ♖a7+ 11 ♖c7 ♖a5 12 ♔d6 winning) 9 d4 ♔f6! 10 ♖h5 (10 ♖d6+ ♔f5! 11 ♔c6 ♔e4 12 d5 ♖c3+! 13 ♔d7 ♖h3 is an easy draw) ♖e7+! (10...♖a3? 11 ♖c5 wins) 11 ♔d8 (11 ♔d6 ♖e6+! 12 ♔d5 ♖e1 13 ♖h7 ♖d1 14 ♖d7 ♖a1! is a standard draw) ♖e4 12 ♖h6+ (12 d5 ♔g6! followed by ...♖d4 wins the pawn) ♔g5! 13 ♖d6 ♔f5 14 ♔d7 ♖e3! transposing into the note to White's 10th move.

2) **5 ♔e7** *(D)* and now:



513a +/=

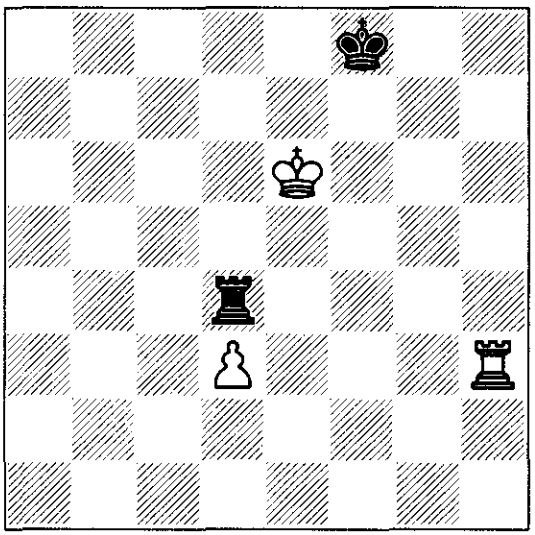
2a) **5...♖d4?** 6 ♖f6+! ♔g5 (6...♔g7 7 ♖d6 ♖f4 8 d4 wins after 8...♖f7+ 9 ♔e6 ♖f6+ 10 ♔d7 ♖f7+ 11 ♔c6 ♖f1 12 d5 or 8...♖e4+ 9 ♔d7 ♔f7 10 d5 ♖d4 11 ♔c7 ♖d1 12 ♖d8 ♖a1 13 ♖b8) 7 ♖d6! ♖a4 (7...♖h4 8 ♔e6 ♖h8 9 ♔e5! ♖h1 10 d4 wins) 8 ♔e6! ♖a3 (8...♔f4 9 d4! ♔e4 10 d5! ♖a8 11 ♖b6! wins) 9 d4 ♖e3+ 10 ♔d5! ♔f5 11 ♖c6 ♖e8 12 ♔c5 wins.

2b) **5...♖d5!** 6 ♔e6 (6 ♖f6+ ♔g5 7 ♖d6 ♖e5+ 8 ♔d7 ♔f5 9 d4 ♖e3 draws as in line 1) ♖d8! 7 ♖g3+ ♔h5! 8 ♔f5 (8 ♔e5 ♔h4! 9 ♖f3 ♔g4 10 ♖f4+ ♔g5 11 ♖d4 ♖e8+! with a simple draw) ♔h4! 9 ♖e3 (9 ♖f3 ♖f8+ 10 ♔e4 ♖e8+! 11 ♔d5 ♖d8+! 12 ♔c4 ♖c8+! 13 ♔b3 ♔g4 draws) ♖f8+! 10 ♔e5 ♖e8+ 11 ♔d4 ♖d8+! 12 ♔c5 ♖c8+ 13 ♔d6 ♖d8+ 14 ♔e7 ♖d5! 15 ♖e4+ (15 ♔e6 ♖d8! and White is not making progress) ♔g3 16 d4 ♔f3! and Black rounds up the pawn.

Now move Black's king to g7. White to play wins by 1 ♔c3! ♖c8+ 2 ♔b4 (not 2 ♔d4? ♔g6! and Black can improve his king position while the pawn is blockaded) ♖b8+ 3 ♔c5 ♖c8+ 4 ♔d6 ♖d8+ 5 ♔e7 ♖d4 6 ♖g3+ ♔h7 (6...♔h6 7 ♔f6 gains a tempo and wins after 7...♔h5 8 ♔e5! followed by d4) 7 ♔e6 ♖d8 8 ♔e5 (White can win by retreating his king to d2 and then playing ♖g1, but the method we follow is quicker) ♖e8+ 9 ♔f6 ♖d8 10 ♔e6 (Black is in zugzwang) ♔h8 (10...♔h6 11 ♔e5 ♖e8+ 12 ♔f6 ♖f8+ 13 ♔e7 ♖f4 14 ♔e6 and d4 cannot be prevented) 11 ♔e5 ♖e8+ 12 ♔f4 ♖f8+ 13 ♔e3 ♖e8+ 14 ♔d2 ♖d8 15 ♖g4, followed by d4 and wins.

If Black's king is further up the board, on g5 or g4, the position is still drawn, but with the king on g3 and White's rook anywhere on the f-file then White to play wins by 1 ♖f5! ♔g4 2 ♖c5! ♔f4 3 ♔c3!, as in diagram 507.

The following position makes use of the above analysis.



514 =/–

*Original*

**(514):** Suppose Black is to move in this position of reciprocal zugzwang. The main line is 1...♖a4 (1...♔g7/g8 2 ♖f3 ♖d8 3 ♔e7 transposes to line 2b in the previous diagram) 2 ♖h8+! ♔g7 with the variations:

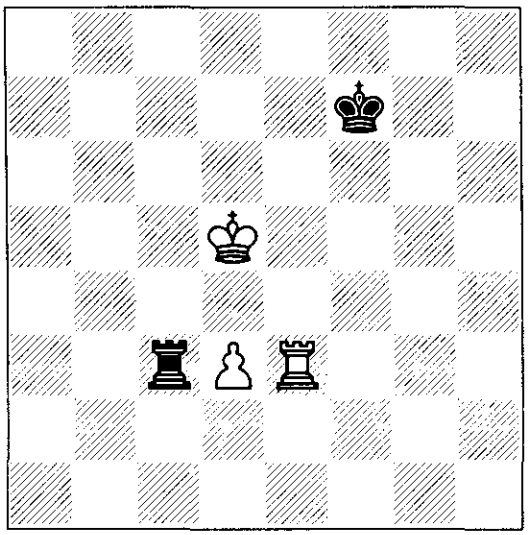
1) **3 ♖d8?** ♖a1 4 d4 ♖e1+! 5 ♔d6 (5 ♔d7 ♖d1! 6 ♔c6 ♔f7 7 d5 ♔e7! 8 ♖d7+ ♔e8! draws) ♔f7! 6 d5 ♖a1! drawing by diagram 472.

2) **3 ♖e8!** ♖d4 (3...♖a6+ 4 ♔d5 ♖a5+ 5 ♔c6 ♖a6+ 6 ♔b5 ♖d6 7 ♔c4! ♔f7 8 ♖e4 ♖d8 9 d4! ♖a8 10 ♔c5 wins by diagram 502) 4 ♖e7+! ♔f8 (4...♔g6 5 ♖d7! ♖h4 6 d4 ♖e4+ 7 ♔d5! ♖e8 8 ♔c6 followed by d5 wins) 5 ♖d7! ♖h4 (5...♖a4 6 ♖d8+! ♔g7 7 d4 is relatively simple) 6 ♖d8+! ♔g7 7 ♖d6! (a very hard move to find; 7 ♖d5? ♔f8! 8 ♔d7 ♖h7+! 9 ♔d8 ♖h3! 10 d4 ♔f7! 11 ♔d7 ♖d3! 12 ♖d6 ♖a3! gives Black a vital extra tempo to start his sideways attack) ♔f8 (other moves do not stop d4) 8 ♔d7! ♖h7+ (8...♖a4 9 ♖f6+ ♔g7 10 ♖f3 ♔g6 11 ♔e6 ♔g5 12 ♔e5 ♖a5+ 13 ♔e4 followed by d4) 9 ♔d8! ♖a7 (9...♖h3 10 d4! ♔f7 11 d5! ♖d3 12 ♔c7 ♖d1 13 ♖d8 ♖a1 14 ♖b8 wins) 10 ♖f6+! ♔g7 11 ♖f3! ♖a3 12 ♔e7 ♔g6 13 ♔e6 ♔g5 14 ♔e5! ♔g4 (or 14...♔g6 15 ♔e4, followed by moving the rook and d4) 15 ♖f4+! ♔g5 16 d4 ♖a5+ 17 ♔e4! and White wins.

White to play has no constructive moves, for example 1 ♖g3 ♖a4 and there is no sensible continuation.

The next position is even more surprising.

**(515):** Although Black's king is only cut off by one file, his rook is very



515 =/–

*Original*

badly placed. With Black to play we have the following lines:

1) **1...♖a3** 2 ♔c4! ♔f6 3 ♖e8! (not 3 ♖e1? ♖a8 4 d4 ♖c8+! drawing by diagram 501) ♔f7 (3...♖a4+ 4 ♔c5 ♔f7 5 ♖e1 is the same) 4 ♖e1 ♖a4+ (or 4...♖a8 5 d4!) 5 ♔c5 ♖a5+ 6 ♔b4 ♖d5 7 ♔c4! ♖d8 8 d4! wins as in diagram 500.

2) **1...♔f8** 2 ♔d6! ♖a3 (2...♔f7 3 ♖e7+! ♔f6 4 d4 ♖a3 5 ♖e6+ ♔f5 6 ♖e1 ♖a6+ 7 ♔c5 ♖a5+ 8 ♔b4 and d5 is unavoidable) 3 ♔c5 ♖a5+ 4 ♔b4 ♖d5 5 ♔c4! ♖d8 6 d4 ♔f7 7 ♔c5 is diagram 500 again.

3) **1...♔f6** (1...♔g6 2 ♖f3 ♔g5 3 ♔e4 ♖a3 4 ♖f8, followed by d4) 2 ♖e6+ ♔f7 (2...♔f5 3 d4 wins after 3...♖c8 4 ♖a6 reaching the reciprocal zugzwang of diagram 494 with Black to play, or 3...♖a3 4 ♖e1 ♔f6 5 ♔c6 ♖a6+ 6 ♔b5 and Black cannot prevent d5) 3 d4 ♖c8 4 ♖e4 ♔f6 5 ♔d6 ♔f5 (5...♖c4 6 ♖e6+ and 7 d5) 6 ♖e5+! ♔f4 7 ♖e6 ♖d8+ 8 ♔c5! ♖c8+ 9 ♖c6 ♖a8 10 d5 and wins.

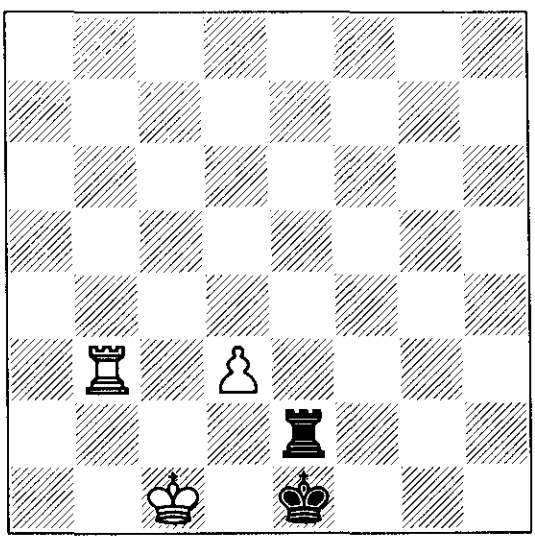
4) **1...♖c8** 2 d4! ♔f6 3 ♖e6+! (3 ♔d6? ♖d8+! is drawn) ♔f5 (3...♔f7 4 ♖e4 ♔f6 5 ♔d6 is line 3) 4 ♖a6! wins by diagram 494.

With White to play 1 ♔d6 (1 ♔d4 ♖c8) ♖a3 2 ♔c5 ♔f6! 3 ♔b4 (3 ♔c4 ♖a8 is similar) ♖a8! 4 d4 ♖b8+ draws as in diagram 501.

Finally, there are positions in which Black's king is cut off on a file, but White's king is cut off by Black's rook operating on the second rank. Analysis is not required because all such positions are drawn.

### 4.5.3: Other situations

Lacking any interesting practical examples, we content ourselves with some reciprocal zugzwangs. The first of these is very complicated, so we first of all examine a preliminary position.



516 +/=

*Original*

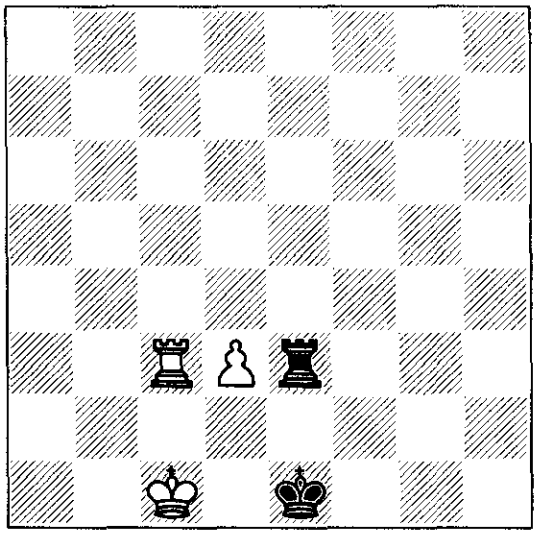
**(516):** White to play wins by 1 d4 and now:

1) **1...♖a2** 2 ♖h3! (the threat of 3 ♖h1+ forces Black's rook off the second rank) ♖a8 (both 2...♔f1 3 d5 and 2...♖a4 3 ♖h4! ♔e2 4 ♔c2! ♔e3 5 ♔c3! ♖a5 6 ♖h8 ♔e4 7 ♖e8+ ♔f5 8 ♔b4 win for White) 3 ♔c2! ♔e2 4 ♖h5! ♔e3 5 ♔c3! ♖c8+ 6 ♖c5! ♖d8 7 ♖e5+! ♔f4 8 ♔d3 ♖a8 9 ♖e6 and wins.

2) **1...♖e4** 2 ♖b4! ♔e2 3 ♔c2! ♔e3 4 ♔c3! ♖e8 5 ♖b5! ♖c8+ 6 ♖c5! transposes to line 1.

3) **1...♖e8** 2 ♔c2! ♔e2 3 ♖b5! ♖c8+ 4 ♖c5! ♖d8 5 ♔c3 ♔e3 6 ♖e5+ is line 1 again.

However, if White's rook starts on a3 then the position is drawn because after 1 d4 ♖e4! 2 ♖a4 ♔e2 3 ♔c2 ♔e3 4 ♔c3 ♖h4 White's rook is undefended, so he cannot play d5, and after 5 ♖b4 ♖h1! 6 ♔c4 ♔e4 Black draws easily.



517 =/–

*Original*

**(517):** With Black to play:

B1) **1...♖h3** 2 ♖b3 ♖h2 (2...♔e2 3 ♔c2! ♖h8 4 ♖b4! transposes) 3 ♖b2! (3 d4? ♖h4! 4 ♖b4 ♔e2! 5 ♔c2 ♔e3! 6 ♔c3 ♖h1! draws because the rook can move to the first rank at once when it isn't on the e-file) ♖h8 4 ♖b4! ♔e2 5 ♔c2! ♔f3 (5...♖c8+ 6 ♖c4! ♖a8 7 ♖e4+! ♔f3 8 ♔b3 ♖b8+ 9 ♔c3 ♖c8+ 10 ♖c4 ♖a8 11 ♖c5! wins by diagram 508) 6 ♖e4! (this move is only possible when Black's rook has quit the e-file) ♖a8 7 ♔b3, heading for diagram 508 again.

B2) **1...♖e8** 2 ♖c5 ♔e2 3 ♔c2! ♖a8 4 ♖e5+! ♔f3 5 ♔b3 ♔f4 6 d4 ♖c8 7 ♔b4 ♖d8 8 ♔c4 winning by diagram 496.

B3) **1...♖e2** 2 d4 ♖e4 (2...♖a2 3 ♖h3! is the previous diagram) 3 ♖c4! ♔e2 4 ♔c2! ♔f3 (4...♔e3 5 ♔c3! transposes) 5 ♔b3 (this prevents both 5...♖e3+ and 5...♔f4; not, however, 5 ♔c3? ♖e3+! drawing) ♔e3 6 ♔c3! wins because there is a threat of d5, so Black has no time for ...♖h4-h1.

B4) **1...♔e2** 2 ♔c2! ♖h3 3 ♖b3 is line B1.

B5) **1...♔f2** 2 ♔b2! (not 2 ♔c2? ♖e2+! 3 ♔b3 ♔e3! 4 ♔c4 ♖d2 drawing) ♔e2 (2...♖e8 3 ♖c5) 3 ♔c2! transposes to line B4.

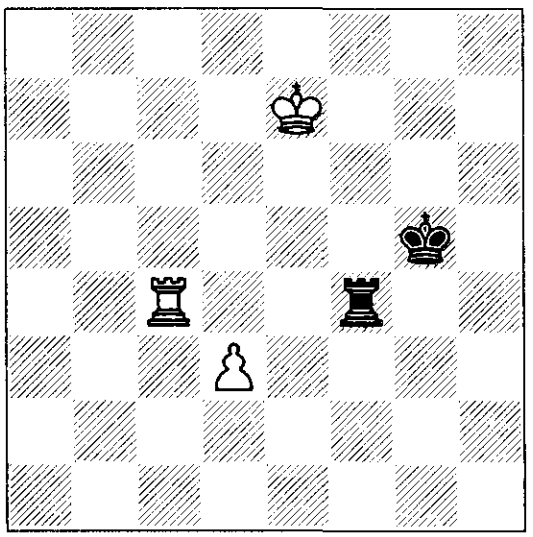
White to play cannot win:

W1) **1 ♔c2** ♖e2+! 2 ♔b3 ♔d2 3 d4 ♖e8 4 ♖h3 ♖b8+ and there is no shelter from the checks.

W2) **1 ♖b3** ♔e2! (not 1...♖e2? 2 d4 winning as in the previous diagram) 2 ♔c2 ♖e8 (or 2...♖e7, but not 2...♖e6? 3 ♖b4! ♔f3 4 ♔c3 ♖a6 5 ♖b5! transposing to diagram 509) 3 ♖b4 ♔f3! (not 3...♔e3? 4 ♔c3 ♖a8 5 ♖e4+! ♔f3 6 ♖e5 winning as in diagram 508, nor 3...♖a8? 4 ♖e4+! ♔f3 5

♔b3 ♖b8+ 6 ♔c3 ♖c8+ 7 ♖c4 ♖a8 8 ♖c5! with diagram 508 again) 4 ♔c3 ♖a8! 5 ♖b5 ♖c8+! 6 ♔d4 ♔f4 drawing as in diagram 508 with W♖b4.

W3) **1 ♖a3** ♖e2! (not 1...♔e2? 2 ♔c2! ♖e8 3 ♖a4! ♔f3 4 ♔c3 and, unlike line W1, Black cannot occupy the important a-file) drawing, as pointed out in diagram 516.



518 =/–

*Original*

**(518):** As usual, we start with Black to play:

1) **1...♖f5** 2 d4 (threat ♖c5) ♔g6 3 ♖c6+ ♔g7 4 ♖c7 ♔g6 (4...♖a5 5 d5) 5 ♔d6 and d5 is not far off.

2) **1...♔f5** 2 ♔d6! ♖f1 3 d4 ♖a1 4 d5 ♖a6+ 5 ♖c6! ♖a8 6 ♖c5 (threat ♔d7) ♖a7 7 ♖c1 ♖a6+ 8 ♔c7 ♖a7+ 9 ♔b6 with an easy win.

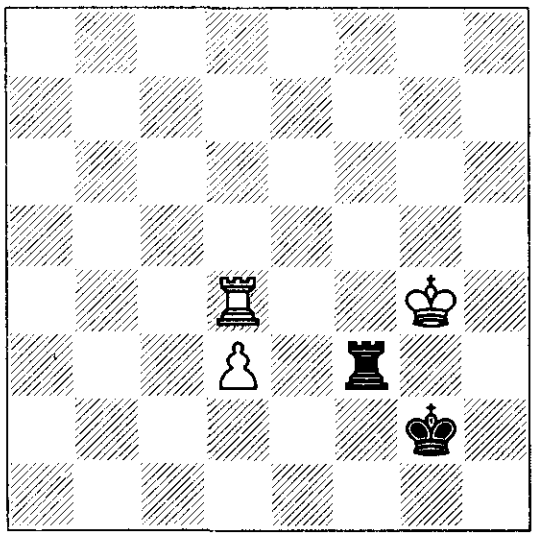
3) **1...♖f1** 2 d4 ♖e1+ 3 ♔d6 ♖e4 4 ♖c5+ ♔f6 5 d5! ♖e8 6 ♖c7 ♖d8+ 7 ♔c6 ♔e5 8 ♖e7+! ♔f6 9 d6 wins.

With White to play:

1) **1 d4** ♖e4+! (1...♔f5? 2 ♖c5+ ♔e4 3 d5! wins) 2 ♔d6 ♔f6! 3 ♔d5 ♖e1 4 ♖c7 ♖d1! 5 ♖d7 ♖a1! with a draw analogous to that of diagram 472.

2) **1 ♔e6** ♖f6+! 2 ♔d7 ♖f7+ and there is no real shelter for the king.

3) **1 ♖c5+** ♔g6! 2 ♖d5 ♖f7+! 3 ♔e6 ♖f6+! 4 ♔e5 ♖f5+ 5 ♔e4 ♖f1 with an easy draw.



519 =/–

*Original*

**(519):** With Black to move:

1) **1...♖e3** 2 ♔f5! (2 ♔f4? ♔f2! draws) ♖h3 (2...♔f3 3 ♖f4+! ♔e2 4 d4!) 3 ♖g4+ ♔f3 (Black must play this to prevent d4, but now his rook is not attacking the pawn) 4 ♖a4 ♖h5+ 5 ♔e6! ♖h6+ 6 ♔d5 ♖h5+ 7 ♔c4 ♖h8 8 d4 ♔e4 9 ♖a5! with a win by diagram 496.

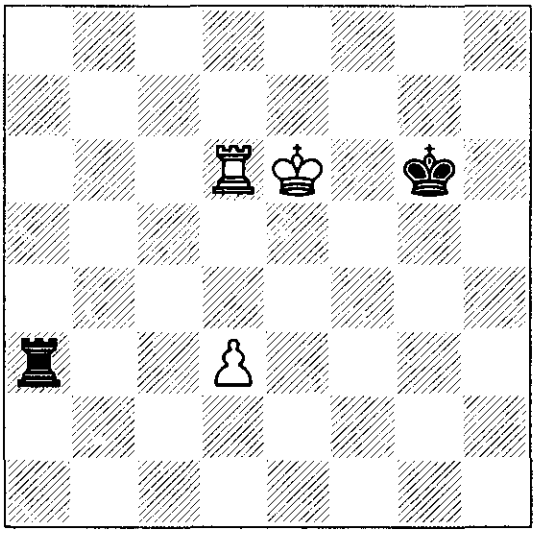
2) **1...♖g3+** 2 ♔f4! (2 ♔f5? ♔f2! 3 ♖d8 ♔e3 4 d4 ♖h3 draws) ♔f2 3 ♖d8! (but not 3 ♖d7? ♖f3+ 4 ♔e4 ♖e3+! 5 ♔d4 ♖e8! 6 ♔d5 ♔e3 7 d4 ♔d3 with an easy draw) ♖f3+ (3...♖g7 4 d4 ♔e2 5 ♔e4 ♖e7+ 6 ♔d5! ♔d3 7 ♖h8 ♖d7+ 8 ♔c5! and wins) 4 ♔e4 ♖e3+ 5 ♔d4! ♖e7 6 ♔d5 ♔e3 7 d4! ♖a7 8 ♖h8 ♖a5+ 9 ♔c4! ♖a4+ 10 ♔c5! ♖a5+ 11

♔b4 ♖d5 12 ♔c3! ♖d7 13 ♖e8+ ♔f4 14 ♔c4 and White's control of the eighth rank makes the win easy.

3) **1...♖h3** 2 ♖d8 ♖h7 3 d4 ♔f2 4 ♔f4! ♔e2 5 ♔e4! wins as in line 2.

4) **1...♖f8** 2 ♖a4 (not 2 ♖c4? ♖d8! 3 d4 ♔f2! 4 ♔f4 ♔e2! 5 ♔e4 ♖e8+! 6 ♔f5 ♔d3 gaining a vital tempo) ♖d8 (2...♖f7 3 ♖a2+ ♔f1 4 d4! wins after 4...♖d7 5 ♔f3 or 4...♔e1 5 d5! ♖d7 6 ♖a5!) 3 d4! ♔f2 4 ♔f4! ♔e2 5 ♔e4 ♖e8+ 6 ♔f5 ♔d3 7 d5! and wins.

White to play has no sensible moves, for example 1 ♖d5 ♔f2! 2 d4 ♔e3! wins the pawn.



520 =/–

*Original*

(**520**): This position is more surprising. When Black is to move:

1) **1...♖b3** (this reduces Black's checking distance) 2 ♖d7 ♖b6+ 3 ♔e5 ♖b5+ 4 ♔d6 ♖b6+ (4...♖b4 5 ♔c5 and 4...♔f6 5 d4! are similar) 5 ♔c5 ♖b8 6 d4 ♔f6 7 d5 ♖c8+ 8 ♔d6! ♖a8 9 ♖c7 wins.

2) **1...♖a1** (we will see later why this weakens Black's position) 2 d4! ♖e1+ 3 ♔d7+! ♔f5 (3...♔f7 4 d5 ♖d1 5 ♔c7 wins) 4 d5! ♖d1 5 ♔e7 ♖h1 (the point is that 5...♔e5 loses to 6 ♖e6+! and Black cannot take the pawn) 6 ♖e6 ♖h7+ 7 ♔d6 ♖h8 8 ♖e1 and wins.

3) **1...♖a8** 2 d4! ♖e8+ 3 ♔d7+! ♔f7 4 d5 ♖e5 5 ♔c6 ♖e1 (5...♔e8 6 ♖h6) 6 ♖h6 ♖c1+ 7 ♔d7! ♖a1 8 ♖c6 and wins.

4) **1...♔g5** 2 d4 ♖e3+ (2...♔f4 3 ♖c6 ♖h3 4 d5 ♖h6+ 5 ♔f7 ♖h7+ 6 ♔f6 ♔e4 7 ♖c5! ♔d4 8 ♖a5! ♖h5 9 ♔e6! ♔c4 10 ♔d6! ♔b4 11 ♖a1! ♔b5 12 ♖b1+! ♔c4 13 ♔c6 and wins) 3 ♔d5! ♔f5 4 ♖c6 ♖e8 5 ♔c5 ♖a8 6 d5! winning as in line 2 of diagram 485.

5) **1...♔g7** 2 d4 ♖e3+ 3 ♔d7! ♔f7 4 d5 ♖d3 5 ♔c7 with a familiar win.

With White to play:

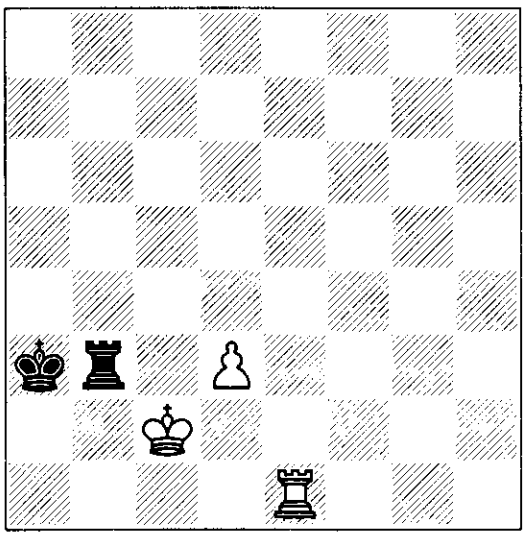
1) **1 d4** ♖e3+! 2 ♔d7+ (2 ♔d5+ ♔f7!) ♔f5 3 d5 (3 ♔c6 ♔e4) ♖d3! 4 ♔e7 ♔e5 and, thanks to the proximity of Black's rook, White cannot win with 5 ♖e6+.

2) **1 ♔d7+** ♔f5 and 1 ♔d5+ ♔f7 are easy draws.

3) **1 ♖d7** ♖a6+! 2 ♔e5 ♖a5+! 3 ♔d6 ♔f6 4 d4 ♖a6+ 5 ♔d5 ♖a5+ 6 ♔c6 ♖a6+ 7 ♔b5 ♔e6 with a draw.

(**521**): This position is exceptional in that Black's king is on the short side. The analysis is relatively simple. With Black to move:

1) **1...♖b6** 2 d4! ♔a4 (2...♔b4 3 ♔d3! and now White threatens to exchange rooks) 3 ♔d3! (3 ♔c3? ♔b5 draws) ♖b2 (3...♖h6 4 ♖b1 forces through d5) 4 ♖e8 (again preventing Black's king moving to the b-file) ♖b7 (4...♖h2 5 ♖b8) 5 ♔c4 ♖c7+ (5...♔a5



521 =/–

*Original*

6 ♔c5!) 6 ♔d5! ♔b4 7 ♖b8+ ♔c3 8 ♔d6! followed by d5 and wins.

2) **1...♔a4** 2 ♖e4+! ♔a3 (2...♖b4 3 ♔c3) 3 d4 ♖b5 4 ♔d3 ♔b4 5 ♖e1 ♖h5 6 ♖b1+! ♔a5 7 ♔c4 and 8 d5 wins for White.

With White to play, 1 ♖e8 (1 d4 ♔b4! draws immediately, while 1 ♖h1 ♔a4 2 ♖h4+ ♖b4! exploits White's undefended rook) ♖b7 2 ♔c3 ♖c7+ 3 ♔d4 ♔b3 4 ♔d5 ♔c3 draws simply.

There are eight reciprocal zugzwangs in the ending of ♖+♙d3 v ♖. These are diagrams 512, 514, 515, 517, 518, 519, 520 and 521.

**Practical tips:** The most important positions when Black's king is cut off along a rank are diagrams 507 and 508. The situation when the king is cut off along a file is more complex, but diagrams 510, 511 and 513 contain the important information.

## 4.6: Pawn on the second rank

4.6.1: Black's king is cut off along a rank 313
4.6.2: Black's king is cut off along a file 316
4.6.3: Other situations 321

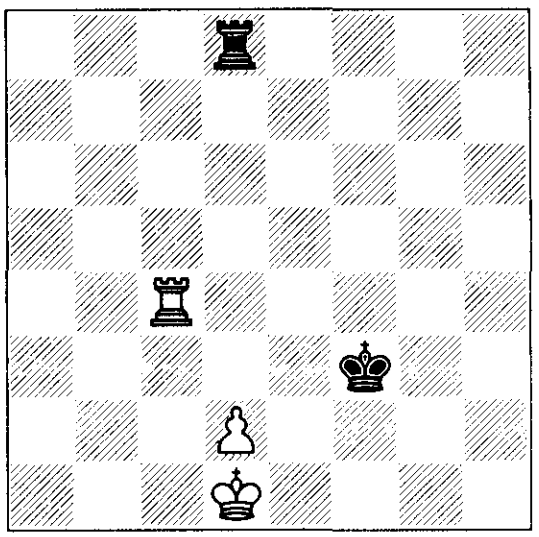
### 4.6.1: Black's king is cut off along a rank

If White's rook occupies the fourth rank then the position is a draw.

**(522):** One rank further up and White can win with the move (diagram 507), but here he cannot. After 1 ♔c2 ♖a8 2 d3 Black has a number of ways to draw, but perhaps the simplest is 2...♖a3 3 ♖e4 ♔g3 4 ♔d2 (4 d4 ♔f3 5 ♖h4 ♔g3! 6 ♖e4 ♔f3 7 ♖e8 ♔f4 8 d5 ♖a5 9 d6 ♖d5 draws) ♔f3! 5 ♖c4 (5 ♖b4 ♖a5 6 ♔c3 ♖a3+ also draws after 7 ♔c4 ♔e3 8 d4 ♔e4 or 7 ♖b3 ♖a8 8 ♖b5 ♖c8+! 9 ♔d4 ♔f4) ♖a5 6 ♔c3 (what else?) ♖a3+! 7 ♔d4 ♔e2 8 ♖c2+ ♔d1 9 ♖h2 ♖a8! followed by frontal checks.

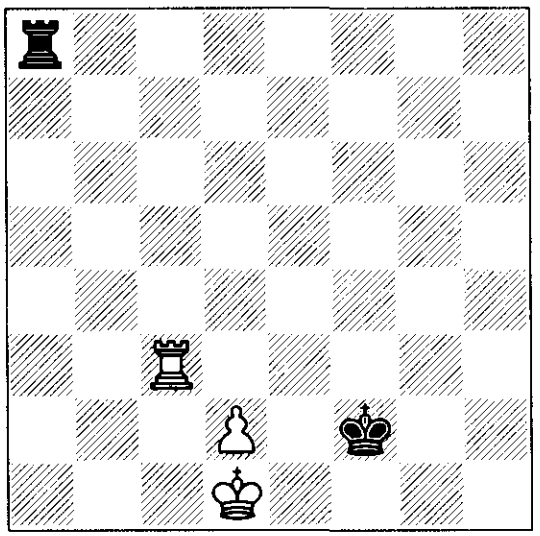
Even with his rook on the third rank, White's winning chances are minimal. He can only win if the immediate advance of the pawn leads to a winning position.

**(523):** White to play wins by 1 d4! ♖a4 (1...♖d8 2 ♖d3! ♖d5 3 ♔d2 and 1...♖a1+ 2 ♔d2 ♖a4 3 d5 win easily) 2 ♖d3! ♖a1+ (or the pawn advances) 3



522 =/=

*Chéron, 1944*



523 +/=

*Chéron, 1966*

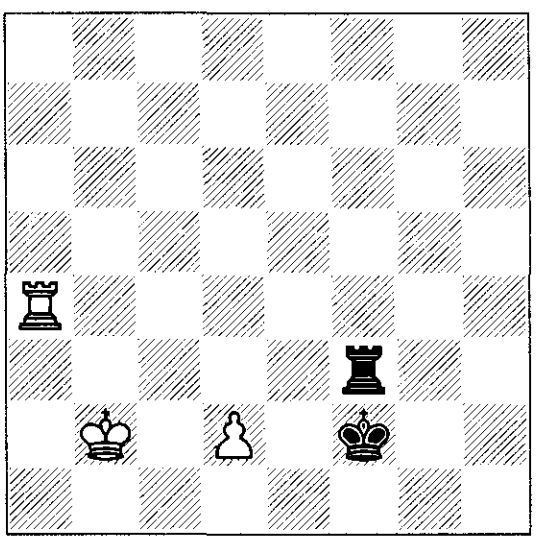
♔c2! (after 3 ♔d2 ♖a2+ White can only win by 4 ♔d1!) and now:

1) **3...♖a8** 4 ♖h3 (4 d5? ♔e2! draws after 5 d6 ♖c8+! 6 ♖c3 ♖d8! 7 ♖c6 ♔e3 or 5 ♖h3 ♖d8! 6 ♖h5 ♔e3 7 ♔c3 ♖c8+! 8 ♔b4 ♔d4! when 9 ♔b5 and 9 d6 simply lose the pawn) and now:

1a) **4...♖a4** 5 d5 ♔e2 (5...♖a5 6 d6 ♔e2 7 d7 wins after 7...♖d5 8 ♖h7! ♔e3 9 ♔c3 ♔e4 10 ♔c4 ♖d1 11 ♔c5 or 7...♖c5+ 8 ♔b3! ♖d5 9 ♖h7! ♔d3 10 ♔b4! ♔d4 11 ♖g7 winning as in diagram 433) 6 ♖h2+ (Chéron makes one of his rare mistakes here in giving 6 d6?, allowing a draw by 6...♖c4+! 7 ♔b3 ♖d4! 8 ♖h6 ♔d3 9 ♖e6 ♔d2 and White cannot make progress) ♔e3 7 ♔c3 ♖a8 (the threat is d6 and to meet this Black must abandon the fourth rank) 8 ♔c4 ♖c8+ 9 ♔b5! ♖c1 10 d6 and wins.

1b) **4...♔e2** 5 ♖h5! (after 5 ♔b3? ♖b8+ 6 ♔c4 ♖c8+! 7 ♔b5 ♖d8! there is no shelter for White's king) ♖c8+ (5...♔e3 6 ♔c3! ♖a3+ 7 ♔b4 ♖d3 8 d5 followed by ♔c5 wins) 6 ♖c5! ♖a8 7 ♖e5+ ♔f3 8 ♔c3 winning by diagram 496.

2) **3...♔e2** 4 ♖h3 ♖a4 (4...♖a8 5 ♖h5! is line 1b) 5 ♖h4! ♔e3 6 ♔c3! ♔f3 (6...♖a3+ 7 ♔b4 ♖d3 8 ♔c4 and wins) 7 ♔d3 ♔g3 8 ♖h1 ♔f4 9 ♖f1+ ♔g5 10 ♔e4 and d5 wins.



524 =/–

*Original*

**(524):** It is hard to imagine that this position is reciprocal zugzwang. In

order to understand the following play, readers should first study diagram 508, which shows that White wins if he can play d3 with his king on c3 and his rook on the a-file. There are two key points; firstly, White's king is often better placed on b2 than c2, because if Black plays ...♖b8+ White advances immediately to c3, while if Black plays ...♖a8 White need not worry about ...♖a3. The second point is that a check on f4 can be very awkward for Black, so his rook is best placed on the f-file. With Black to move:

1) **1...♖f8** 2 d3! ♖c8 (2...♔e3 3 ♔c3! ♔f3 4 ♖c4 ♖a8 5 ♖c5! wins by diagram 508) 3 ♖c4 ♖a8 (this is a draw if White's king is on c2, because 4 ♖e4 may be met by 4...♖a3!) 4 ♖e4! ♔f3 5 ♖e5 wins, again by diagram 508.

2) **1...♖h3** 2 ♔c2! (threat d4) ♖h8 3 ♖f4+! (White exploits the fact that Black's rook isn't on the f-file) ♔g3 4 ♖e4! (threat d3, with a win by diagram 508) ♖a8 (4...♔f3 5 d3!) 5 ♔b3 (5 d3? ♖a3! draws by diagram 522) ♖b8+ (5...♔f3 6 d3!) 6 ♔c3 ♔f3 (6...♖a8 7 d4) 7 d3! ♖c8+ 8 ♖c4 and we are exactly in diagram 508.

3) **1...♖d3** 2 ♔c2! ♖d8 3 ♖f4+! (once again Black needs his rook on f8; 3 d3? ♖c8+! draws after 4 ♔d2 ♔f3! or 4 ♖c4 ♖a8! – see diagrams 508 and 522 respectively) ♔g3 4 ♖e4! wins as in line 2.

4) **1...♔e2** 2 ♔c2! ♖f8 3 ♖e4+! ♔f3 4 d3! allows White to reach his target position without difficulty.

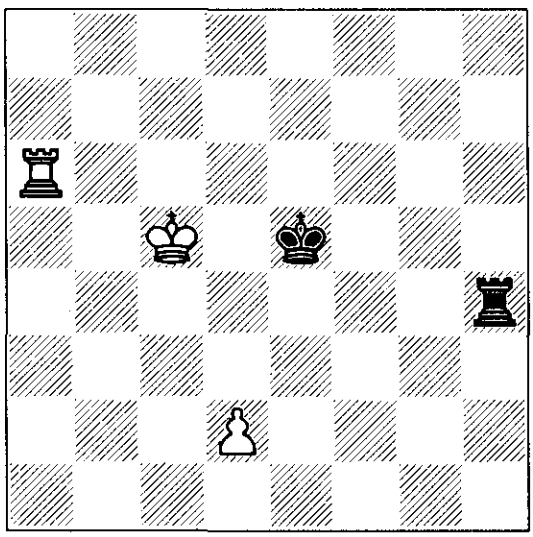
With White to move:

1) **1 ♔c2** ♖f8! 2 ♖e4 (2 d3 ♖c8+! 3 ♖c4 ♖a8! 4 ♖e4 ♖a3! as above) ♖a8 3 d4 (3 d3 ♖a3!) ♖a3 draws.

2) **1 ♖c4** ♔e2! 2 ♔c2 ♖a3! 3 ♖e4+ ♔f3 4 d3 ♔g3 draws as in diagram 522.

3) **1 ♖e4** ♖d3 2 ♔c2 ♖a3! is the same.

4) **1 ♖a3** ♖f8! (accuracy is needed; 1...♖f7? loses after 2 ♔c2! ♖c7+ 3 ♖c3! ♖d7 4 ♖h3! ♔e2 5 ♖e3+! ♔f2 6 ♖e4! ♖c7+ 7 ♔b3 ♖d7 8 ♔c3! ♖c7+ 9 ♖c4! ♖a7 10 ♖f4+! ♔e2 11 d4! ♔e3 12 ♖h4 ♖c7+ 13 ♔b4! ♖b7+ 14 ♔c5 and Black doesn't have enough checking distance) 2 ♔c2 ♖c8+ 3 ♖c3 ♖d8 4 ♖h3 ♔e2 5 ♖e3+ ♔f2! 6 ♖e4 ♖c8+ 7 ♔b3 ♖d8 8 ♔c3 ♖c8+! 9 ♖c4 ♖a8! 10 ♖f4+ ♔e2! (10...♔g3? 11 ♖f5! ♔g4 12 ♖c5! wins) 11 d4 ♔e3 12 ♖h4 ♖c8+! and now Black has sufficient checking distance to draw.



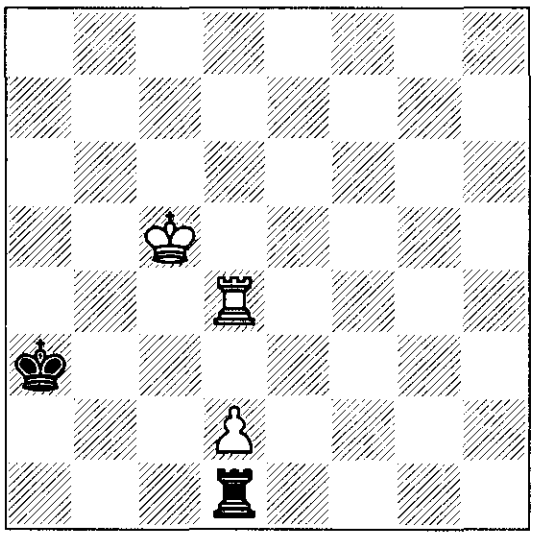
525 =/–

*Original*

**(525):** Black to play can only move his rook along the rank as 1...♔f5 2 d4! ♖h8 3 d5 and 1...♖h5 (1...♖d4 2

♖e6+!) 2 d4+ ♔e4+ 3 ♔c4! ♖h8 4 ♖e6+ ♔f5 5 d5 are hopeless. However, 1...♖g4 fails to 2 ♖h6! ♖g5 (2...♖a4 3 d4+! and 2...♔e4 3 d4 are dead lost) 3 d4+ ♔e4+ 4 ♔c4! ♖g8 5 ♖e6+ just as before.

With White to play 1 d3 (after 1 ♖g6 ♖a4 White cannot play 2 d4+; 1 ♖b6 is also met by 1...♖a4!) ♖d4! draws easily.



526 =/–

*Original*

**(526):** Black to play is obliged to release White's rook. The main line runs 1...♖h1 (1...♔b3 2 ♖b4+! followed by d4 and 1...♖c1+ 2 ♖c4! are worse) 2 ♖e4 ♖h5+ 3 ♔c4 ♖h8 4 d4 ♔a4 (4...♖c8+ 5 ♔b5! ♖d8 6 ♔c6 ♖c8+ 7 ♔d7 ♖c4 8 ♖e3+! advances the pawn) 5 ♖e5! ♖c8+ 6 ♖c5! ♖h8 7 ♖c6 ♔a5 8 d5 ♖h4+ 9 ♔c5! ♖h1 10 d6 with an easy win.

With White to move:

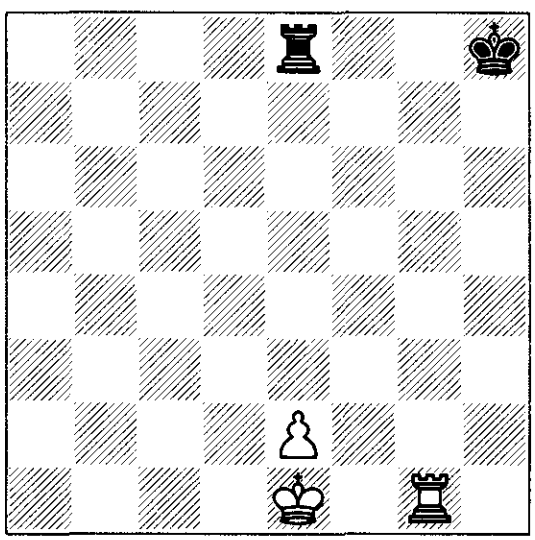
1) **1 ♖d8** ♖c1+! 2 ♔d5 (2 ♔b5 ♖b1+! 3 ♔a5 ♖a1 4 d4 ♔b3+! 5 ♔b5 ♔c3! draws) ♖d1! (Black has to make sure his king is not cut off on the a-file; thus 2...♔b4? 3 ♖b8+! and 2...♖h1? 3 ♖b8 are wrong) 3 d4 ♔b4! 4 ♖b8+ ♔c3! 5 ♖c8+ ♔b4 and with his king on the short side Black has no trouble drawing.

2) **1 ♔b5** ♖b1+! 2 ♔c6 ♖c1+ 3 ♔d5 ♖c8 is an easy draw.

3) **1 d3** (this gives Black a waiting move) ♖d2! and now the variations are similar to those above, for example 2 ♖d8 ♖c2+! 3 ♔d5 ♖d2!, or 2 ♔c4 ♖c2+!.

### 4.6.2: Black's king is cut off along a file

First of all we take the basic situation with the pawn on e2 and White's king on e1. When Black's king is on the short side he can be cut off at a maximum distance of two files, and in this case White only wins if Black's king is very badly placed.



527 +/=

*Original*

**(527):** White to play wins by 1 ♖g2 (not 1 ♖g3? ♔h7 2 e3 ♔h6 3 ♔e2 ♔h5

drawing by diagram 510) ♔h7 2 ♔d2! and now:

1) **2...♖d8+** 3 ♔c3 ♖e8 4 ♔d4 ♖d8+ 5 ♔e5 ♖d2 (5...♖e8+ 6 ♔f5 ♖f8+ 7 ♔e6 ♖f4 8 ♔e5, followed by e4) 6 ♔f4 ♔h6 7 ♔f3 (threat ♖g1, followed by e4) ♔h7 8 ♖g1 ♖d8 (preparing to meet e4 by ...♖g8) 9 e3 ♖f8+ 10 ♔e2! ♖d8 11 ♖g2! and White wins by diagram 511.

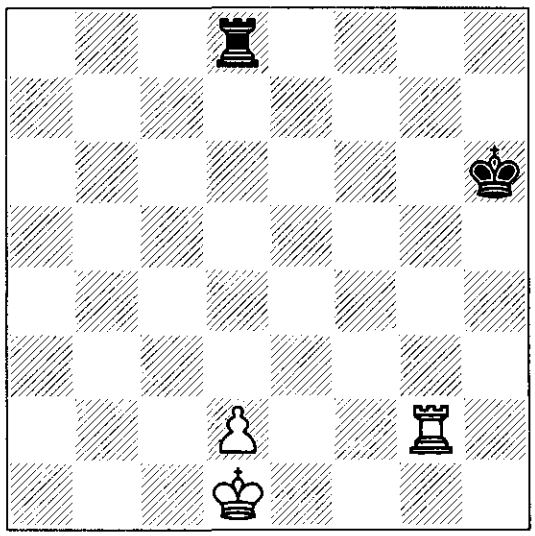
2) **2...♔h6** 3 ♔d3! (not 3 e3? ♖d8+ drawing) ♖d8+ 4 ♔c3 ♖c8+ 5 ♔d4 ♖d8+ 6 ♔e5 ♖d2 (6...♖e8+ 7 ♔f5 ♖f8+ 8 ♔e6 ♖e8+ 9 ♔f7 ♖e3 10 ♔f6! ♔h7 11 ♔f5 and Black cannot prevent e4) 7 ♔f4 ♖a2 8 ♔f3 ♔h7 9 ♖g1 winning as in line 1.

Black to play can draw by 1...♔h7 2 ♔d2 ♔h6! (and not 2...♖d8+? 3 ♔c3! ♖c8+ 4 ♔d3 ♖d8+ 5 ♔c4 whereupon 5...♖e8 6 ♖g2! and 5...♖c8+ 6 ♔d5! ♖d8+ 7 ♔e6 win for White) 3 ♔d3 ♖d8+! 4 ♔c4 ♖e8 5 ♖g2 ♔h5! 6 ♔d5 ♖d8+! 7 ♔e5 ♖e8+! 8 ♔f5 (8 ♔f6 ♔h4!) ♖f8+! and White cannot make progress.

It is interesting to note that Black can also draw by 1...♖d8 2 ♔f2 (2 e3 ♖g8!) ♔h7! 3 ♔f3 ♖f8+! 4 ♔e4 ♔h6! 5 ♖g2 (5 e3 ♔h5) ♔h5! with very similar play. However, all other first moves lose.

If Black's king starts on h7 then the above analysis implies that White to play can only win if his rook is on g2. If Black's king starts on h6, h5, h4, h3 or h2 then all positions are drawn. We mention briefly that if Black's king starts on h1 then White to play wins if his rook is on g3, g4, g5 or g6, but the position is drawn with the rook on g7. As this result is of minimal practical importance, we must leave readers to work out the reasons for themselves.

Now we look at the situation with W♔d1, W♙d2 and Black's king cut off on the long side. In this case a two-file cut-off is not enough to win because there are no mating threats. White must cut off Black's king by three files to have any winning chances. In this case the result depends on the exact position of Black's pieces. The following position is critical.



528 +/=

*Chéron, 1923*

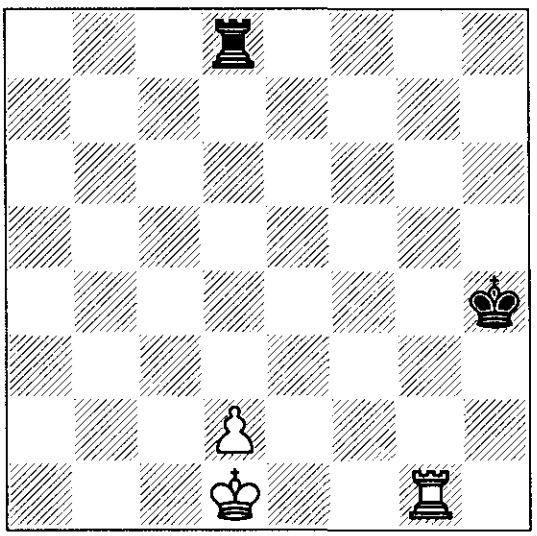
**(528):** White to play wins by 1 ♔c2 (1 ♖g3? ♔h5! draws) ♖c8+ (1...♔h5 2 d3! wins by the remarks after diagram 512) 2 ♔b3 ♖b8+ 3 ♔c4 ♖c8+ 4 ♔d5 ♖d8+ 5 ♔e5 ♖e8+ 6 ♔f6 ♖f8+ (or else d4) 7 ♔e7 ♖f4 8 ♔e6, followed by ♔e5 and the d-pawn will advance.

Black to play continues 1...♔h5 2 ♔c2 ♖c8+ 3 ♔b3 ♖b8+ 4 ♔c4 ♖c8+! 5 ♔d4 ♖d8+! 6 ♔e5 ♖e8+! 7 ♔d6 ♖d8+! 8 ♔e6 ♔h4! (the only move to draw) 9 ♔f5 ♔h3 10 ♖e2 ♔g3 11 ♔e4

♖e8+ 12 ♔d3 ♖d8+ with an easy draw.

However, if White's rook starts on g1 then the position is drawn, even with White to move, because at some stage White must play ♖g2, whereupon Black replies ...♔h5.

In fact, h5 is the safest square for Black's king and with B♔h5 the position is drawn wherever White's rook starts on the g-file. When Black's king is on h4 he is once again in danger.

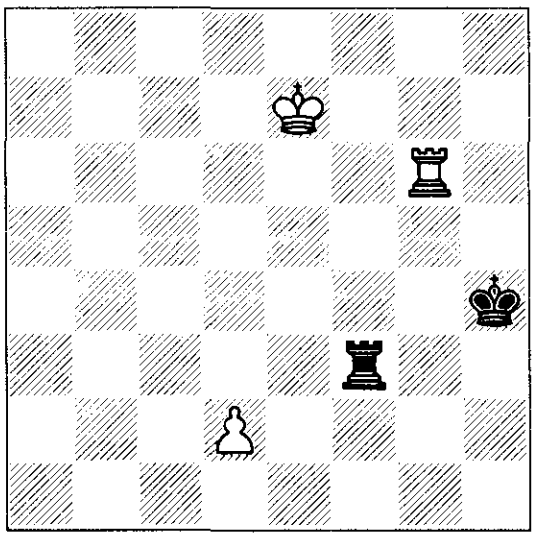


529 +/=

*Chéron, 1944*
*Journal de Genève*

(**529**): White to play wins by 1 ♔e2 ♖e8+ 2 ♔f3 ♖f8+ 3 ♔e4 ♖e8+ 4 ♔f4! ♖f8+ 5 ♔e5 ♖e8+ 6 ♔f6 ♖f8+ (or 6...♖d8 7 ♖d1! ♖d3 8 ♔f5! ♔g3 9 ♔e4! ♖d8 10 d4! ♖e8+ 11 ♔f5 with an easy win) and now:

1) **7 ♔e7** (the simplest win) ♖f3 (7...♖f4 8 ♖d1 ♖d4 9 ♔f6! ♔g4 10 ♔e5! ♖d3 11 ♔e4! ♖d8 12 ♖g1+ wins, but not 9 ♔e6? ♔g5! 10 ♔e5 ♖d3! 11 ♔e4 ♖d8 12 d4 ♔f6! drawing) 8 ♖g6! *(D)* (after 8 ♖g8? ♖d3! 9 ♖d8 Black can exchange rooks) and now Black can try:



529a +/–

1a) **8...♔h5** (8...♖d3 9 ♖d6! ♖a3 10 d4 wins) 9 ♖a6 (9 ♖f6? ♔g4! draws) ♖f4 (9...♔g4 10 d4 ♖d3 11 ♖a4! ♔f5 12 ♔d6! wins) 10 ♔e6 ♔g5 11 ♔d5 ♖f5+ 12 ♔c4 ♖f8 13 ♖c6 ♔f5 14 d4! and wins by diagram 493.

1b) **8...♖f4** (Chéron overlooks this defence, which forces White to play very accurately) 9 d3 and now:

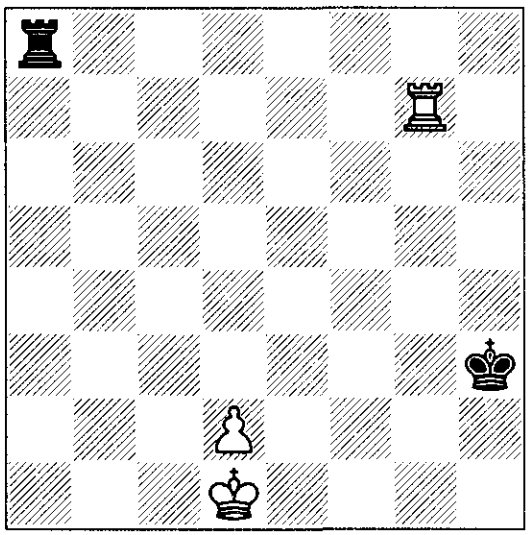
1b1) **9...♖a4** 10 ♖d6! ♔g5 11 ♔e6! ♖a3 12 d4 and wins by line 4 of diagram 520.

1b2) **9...♔h5** 10 ♖c6! (this move is virtually impossible to find without knowing the reciprocal zugzwang of diagram 518; 10 ♖d6? ♔g4! 11 d4 ♔f3! 12 d5 ♔e4! draws) ♔g4 (10...♔g5 11 ♖c4 arrives at diagram 518 with Black to play) 11 ♔e6! (11 ♖c4? ♔g5! is diagram 518 with White to play) ♔g5 12 ♔d5 (threat d4) ♖a4 13 ♔e5 (13 d4? ♔f5! 14 ♔c5 ♖a5+! draws) ♖a5+ 14 ♔e4 ♖a1 15 d4 ♖e1+ 16 ♔d5 ♔f5 17 ♔c5 and wins.

2) **7 ♔e6** (this is an alternative win) ♖e8+ 8 ♔d7 ♖e4 9 ♖g6! ♖a4 (9...♔h5 10 ♖d6) 10 ♖d6! (in 1930 Fila gave a win starting with 10 d3; Chéron correctly refuted this by 10...♖a7+! when 11 ♔e6 allows an exchange of rooks, but he incorrectly concluded that the whole line is a draw) ♔g5 11 ♔e6! ♖e4+ (11...♔f4 12 d4! ♖a8 13 d5 ♖h8 14 ♖c6! ♖h6+ 15 ♔f7 wins as in line 4 of diagram 520) 12 ♔d5! ♖e8 13 d4! ♔f5 14 ♖d7! transposing to diagram 495.

Black to play draws by 1...♔h5! as in the previous diagram.

When Black's king is on h4 White to play wins if his rook starts on g1 or g7, but only draws if it starts on g2 or g6, since in these cases Black has a tempo-gaining king move attacking the rook.



530 =/–

*Original*

**(530):** This reciprocal zugzwang is another total surprise. The basic idea is that White would like to play ♖g1, threatening to win by a king advance followed by ♖d1, just as in diagram 529. However, at the moment ♖g1 is impossible because of ...♖a1+.

We take Black to move:

B1) **1...♖d8** 2 ♖g1! (we already know that 2 ♖g6? ♔h4! is wrong by the comments at the end of the previous diagram; the move played exploits Black's lack of ...♖a1+) ♔h4 3 ♔e2 winning as in diagram 529.

B2) **1...♖b8** 2 ♖g5! (a very hard move to find; the threat is 3 ♔e2 ♖e8+ 4 ♔f3 ♖f8+ 5 ♔e4 and White's rook can interpose) ♔h4 (2...♖e8 3 d3 and 2...♖f8 3 ♔e2 are easier) 3 ♖c5! (this complete change of plan wins because Black has lost some checking distance on the queenside; 3 ♖a5? ♔g4 is too slow) and now:

B2a) **3...♔g4** 4 ♔c2! ♖a8 5 ♔c3! ♖a3+ 6 ♔c4! ♔f4 (6...♖a4+ 7 ♔b5) 7 d4! ♖a4+ 8 ♔c3 winning by diagram 496.

B2b) **3...♖a8** 4 ♔e2! (4 ♔c2? ♖a3! draws) ♔g4 (4...♖a3 5 d3! ♔g4 6 ♔e3! and White's king can advance) 5 ♔e3! ♖e8+ 6 ♔d4 ♔f4 7 ♔c3 (7 d3? ♖a8! draws) ♖a8 8 d4! and wins.

B2c) **3...♖b3** 4 ♖a5! (the difficult moves are not over; 4 ♔c2? ♖a3! draws, so White must occupy the a-file himself) ♔g4 5 ♔c2! ♖h3 6 d3! ♖h1 7 ♔c3 ♖c1+ 8 ♔d4 ♔f4 (8...♖c8 9 ♔e4) 9 ♖a8 (not 9 ♖a7? ♔f5 10 ♔d5 ♔f6 and White cannot occupy the e-file) ♔f5 10 ♔d5! ♔f6 11 ♖e8! ♔f7 12 ♖e4 ♖c8 13 d4! winning as in line 2 of diagram 491.

B3) **1...♖c8** and **1...♖e8** are both met by 2 d3, because Black cannot play his rook to the second rank.

B4) **1...♔h4** 2 ♔e2 (threat 3 d3) ♖e8+ (2...♔h5 3 d3!) 3 ♔f3 ♖d8 4 ♔e3 ♖e8+ 5 ♔f4 ♖f8+ (Black cannot return to d8 due to the mating threat) 6 ♔e5 ♖e8+ 7 ♔d6 ♖d8+ (7...♖e4 8 ♔d5) 8 ♖d7! followed by d4 wins.

B5) **1...♔h2** 2 d4 ♖a4 (2...♖a2 3 d5! ♖a5 4 ♖g5! ♔h3 5 ♔d2 ♔h4 6 ♖e5! ♔g4 7 ♔e3 is similar) 3 ♖g4! ♔h3 4 ♖e4! ♔g3 5 ♔e2! ♖a2+ 6 ♔d3! ♖a3+ 7 ♔c4! ♔f3 8 ♖e1 wins.

It is now possible to see why White cannot win if it is his turn to move, for example:

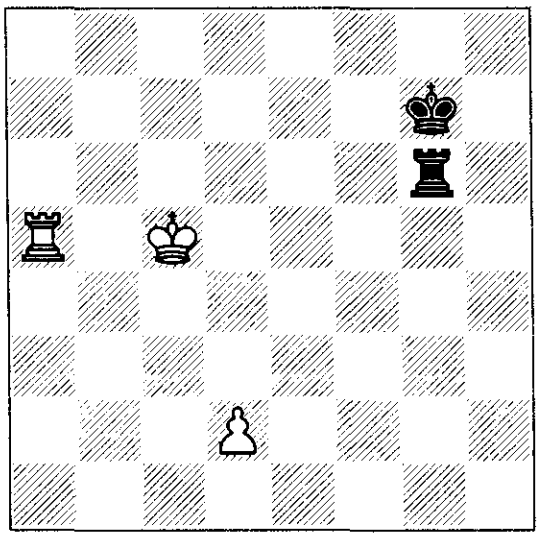
W1) **1 ♔e2** (1 ♔c2 ♖c8+! is the same) ♖e8+! 2 ♔f3 ♖f8+! 3 ♔e4 ♖e8+! 4 ♔f4 ♖d8! (when Black's king is on h3 there is no mate threat, so Black does not need to check) and White is not making progress.

W2) **1 ♖g6** ♔h4! 2 ♔c2 ♔h5 3 ♖g1 ♖c8+! draws just as in diagram 528.

W3) **1 ♖g5** ♔h4! 2 ♖c5 ♔g4 3 ♔c2 ♔f4 4 ♔c3 ♖a3+! and Black is a tempo up on line B2 above.

There are a few winning positions when Black's king is cut off by only two files on the long side, but White's king needs to start in a very active position.

The position W♔e6, ♖f2, ♙d2 v B♔g6, ♖d8 is fundamental for all such situations. This is diagram 421 shifted to the right. White to play wins with the tempo-losing manoeuvre 1 ♔e5 ♖e8+ 2 ♔d5 ♖d8+ 3 ♔e6 and Black must weaken his position. The analysis is virtually identical to that given for diagram 421, so we need not repeat it here.



531 +/

*Original*

(**531**): This diagram makes use of the position mentioned above. The analysis runs:

1) **1 ♖a1?** (1 d4? ♔f7 and 1 ♖a4? ♖g2 2 d4 ♔f7 draw) ♖g5+! (1...♔f7? 2 ♖e1! ♖g5+ 3 ♔c4! ♖g8 4 d4! ♖c8+ 5 ♔b5 ♖d8 6 ♔c5 ♖c8+ 7 ♔b6 ♖d8 8 ♖e4! ♖b8+ 9 ♔c7 ♖b4 10 ♔c6 ♔f6 11 ♔c5 ♖a4 12 ♔b5 ♖a8 13 d5 wins) and now:

1a) **2 ♔c4** ♔f6! 3 ♖e1 ♖g8! 4 d4 ♖c8+! 5 ♔b5 ♖d8! 6 ♔c5 ♖c8+! 7 ♔b6 ♖d8 8 ♖e4 ♔f5! (this is why 2...♔f7? loses; Black needs to attack the rook without loss of time) 9 ♖e5+ ♔f6! 10 ♔c5 ♖c8+ 11 ♔b5 ♖b8+ 12 ♔c4 ♖c8+ 13 ♖c5 ♖d8 draw.

1b) **2 ♔c6** (2 ♔d6 ♖g4! is similar) and now:

1b1) **2...♖g6+?** 3 ♔d5! ♖g5+ 4 ♔e6! ♖g6+ 5 ♔e7! ♖g4 6 ♖e1 ♔g6 7 ♔e6! ♖d4 8 ♖e2! ♖d8 9 ♖f2! reaches the position mentioned above.

1b2) **2...♖g4!** 3 ♖f1 (3 ♔d5 ♔f6! 4 ♖e1 ♖g8! as before) ♖d4! 4 ♖f2 ♖d8! 5 ♔c5 ♖c8+ 6 ♔d5 ♖c2! 7 ♔e6 ♖c6+

8 ♔e5 ♖c2 9 ♔e4 ♖a2 10 ♔e3 ♖a8 draws.

2) **1 ♖a3!** ♖g5+ (or 1...♔f7 2 ♖e3! ♖g5+ 3 ♔c4! ♖g8 4 d4 and wins because Black's king is on the bad square f7) 2 ♔c6! (not 2 ♔d6? ♖g4! nor 2 ♔c4? ♔f6!) and now:

2a) **2...♖g4** 3 ♖f3! ♖d4 4 d3! (this is the difference between 1 ♖a1? and 1 ♖a3!) ♖d8 5 ♔c5! ♖c8+ 6 ♔d6 ♖d8+ 7 ♔e7 ♖d4 8 ♖g3+ ♔h7 9 ♔e6 ♖d8 10 ♔e5 and White wins by retreating his king to d2, reaching the position given after diagram 512.

2b) **2...♖g6+** with the branch:

2b1) **3 ♔c7?** ♖g4 4 ♖f3 ♖d4 5 d3 (5 ♖f2 ♔g6 6 ♔c6 ♖d8 7 ♔c5 ♖c8+ 8 ♔d6 ♖c2! 9 ♔e6 ♖c6+ 10 ♔d5 ♖c2 and the king has to come all the way back to free the pawn, as in line 1b2 above) ♔g6! 6 ♔c6 ♖d8! drawing by diagram 513.

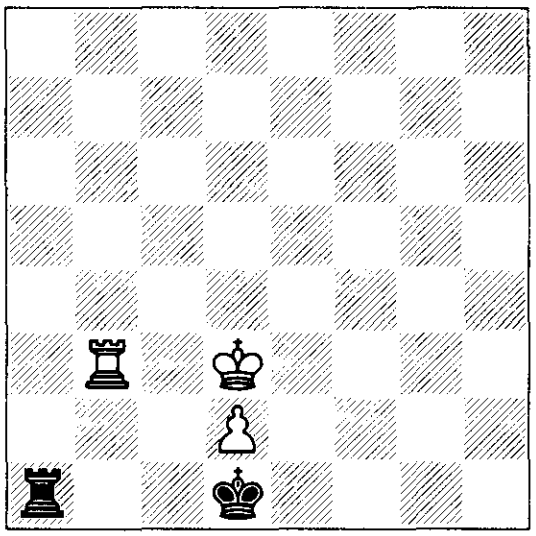
2b2) **3 ♔d5!** ♖g5+ (3...♔f7 4 ♖e3!) 4 ♔e6! ♖g6+ 5 ♔e7! ♖g4 6 ♖e3! ♖d4 7 ♖e2! (not 7 d3? ♔g6! 8 ♔e6 ♔g5 9 ♔e5 ♖d8 and White's rook is subject to attack from Black's king) ♔g6 8 ♔e6! ♖d8 9 ♖f2! and again we reach the position mentioned just before diagram 531.

### 4.6.3: Other situations

We continue with three final positions of reciprocal zugzwang.

**(532):** With Black to play:

1) **1...♔e1** (1...♖c1 2 ♖c3 ♖a1 3 ♔e3! is the same) 2 ♔e3! ♔d1 3 ♖c3! (3 d4? ♔c2! draws) ♖a8 4 d4! ♖e8+ 5 ♔d3! ♖d8 6 ♖c7, followed by ♔c4 and d5.

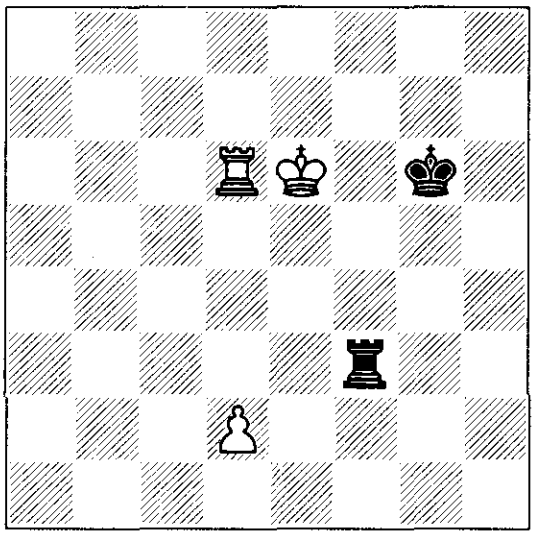


532 =/–

*Original*

2) **1...♔c1** 2 ♔c3 ♔d1 3 d4 ♔e2 4 d5 ♖a8 (4...♔e3 5 ♔b2+) 5 ♔d4 with an easy win.

With White to play, 1 ♔e3 (1 ♔c3 ♖c1+! and 1 ♖c3 ♖a8 are easy draws) ♖a8 2 d4 ♔c2! 3 ♖b5 ♔c3 4 ♖c5+ ♔b4 5 ♔e4 ♖h8 is a comfortable draw since Black's king is on the short side.



533 =/–

*Original*

**(533):** This is closely related to diagram 520. With Black to move:

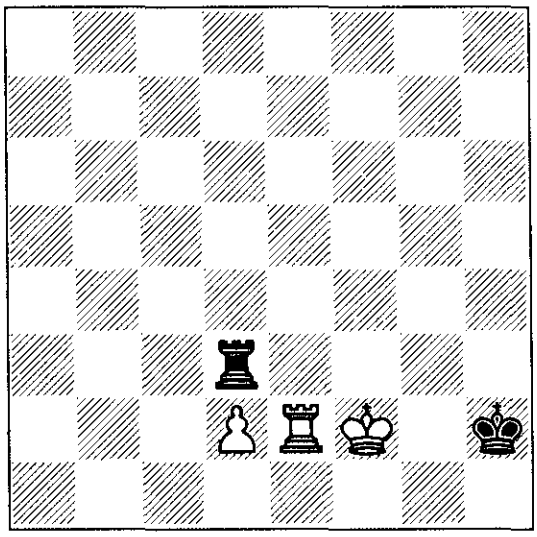
1) **1...♖b3** 2 ♖d7 (1...♖h3 is also met by 2 ♖d7) ♖b6+ 3 ♔e5 ♖b5+ 4 ♔d6 ♔f5 (4...♖b6+ 5 ♔c5 followed by d4 wins as in line 1 of diagram 520) 5 ♔c6! ♖b1 (5...♖b4 6 d4! ♖c4+ 7 ♔d5! ♖c8 8 ♖f7+ ♔g6 9 ♖f1 wins by diagram 499) 6 d4! ♔e4 7 d5! ♖c1+ 8 ♔d6! ♖a1 9 ♖h7! wins as in line 1 of diagram 495.

2) **1...♖a3** 2 d3 is diagram 520 with Black to move.

3) **1...♔g5** 2 d4 ♖e3+ 3 ♔d5! is line 4 of diagram 520.

4) **1...♔g7** 2 d4 ♖f6+ (2...♖e3+ 3 ♔d7! is line 5 of diagram 520) 3 ♔d7 wins by line 2a in diagram 513.

With White to move 1 ♔e7+ ♔f5, 1 ♔e5+ ♔f7! and 1 ♖d7 ♖f6+! 2 ♔d5 ♖f5+! are easy draws, while 1 d4 ♖e3+! transposes to diagram 520.



534 =/–

*Original*

**(534):** With Black to play, 1...♔h1 (1...♖d8 2 d4 ♔h3 3 ♖e4 ♖d7 4 ♔e3 ♔g3 5 ♖e5 ♔g4 6 d5 is an easy win) 2 ♔e1 ♖d4 (2...♔g1 3 ♖e8 ♔g2 4 ♔e2! ♖d7 5 ♔e3 followed by d4 wins) 3 ♖e8 ♔g2 4 ♔e2 ♖g4 5 ♔e3 ♖g3+ 6 ♔e4 ♖g4+ (6...♔f2 7 ♖f8+ ♔e2 8 d4! wins) 7 ♔d5 ♖g5+ 8 ♔c4 followed by d4 gives White a straightforward win.

White to play might as well agree a draw immediately, since 1 ♔e1+ ♔g3! 2 ♖e8 ♔f3 offers no winning chances at all.

The longest win in ♖+♙d2 v ♖ is the position W♔h6, ♖a5, ♙d2 v B♔h8, ♖h4. Readers should do some work, so this final position is given without analysis. I will only provide the clue that with best play White can promote his pawn in 59 moves.

There are seven positions of reciprocal zugzwang in the ending of with ♖+♙d2 v ♖. These are diagrams 524, 525, 526, 530, 532, 533 and 534.

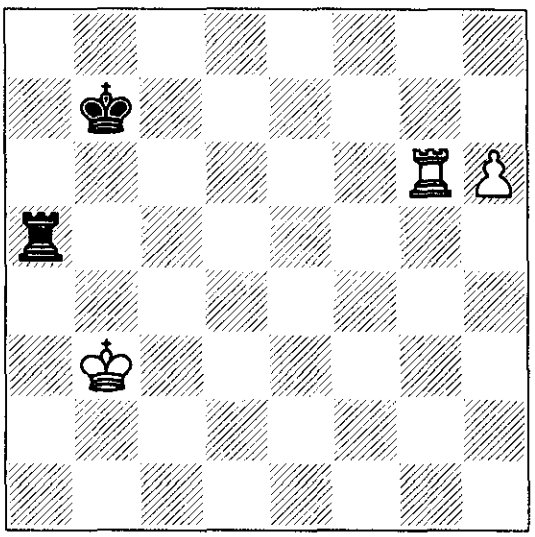
**Practical tips:** The situation in which Black's king is cut off along a rank isn't very interesting. Only diagram 522 is important. By contrast, the positions with Black's king cut off along a file are quite complicated, and over-the-board players should look at diagrams 527, 528 and 529.

# Exercises

The order of the exercises reflects the order of material in the body of the book. Thus, for example, positions containing an a- or h-pawn come before those with a b- or g-pawn, and positions with an a-pawn on the sixth rank precede those with an a-pawn on the fifth rank.

The level of difficulty varies considerably, but there are few positions which cannot be solved by referring to the relevant section in the book and applying a little thought.

The solutions start on page 333.

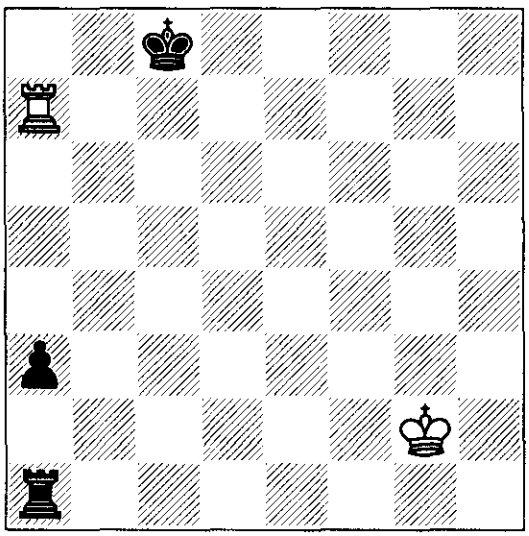


536 W

**B. Lalić – Loncar**

*Djakovo, 1994*

This is another position in which the Vancura draw (diagram 34) is important. Is White winning?

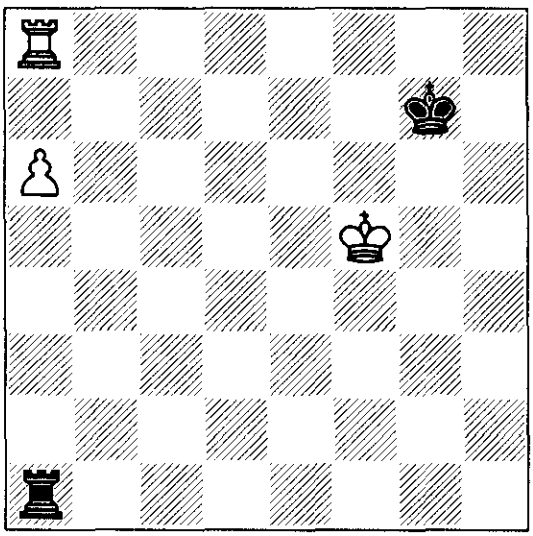


535 W

**Jakubiec – Oral**

*Czech Republic Team Ch, 1994/5*

Here White played 1 ♔f2. Was this a good move?

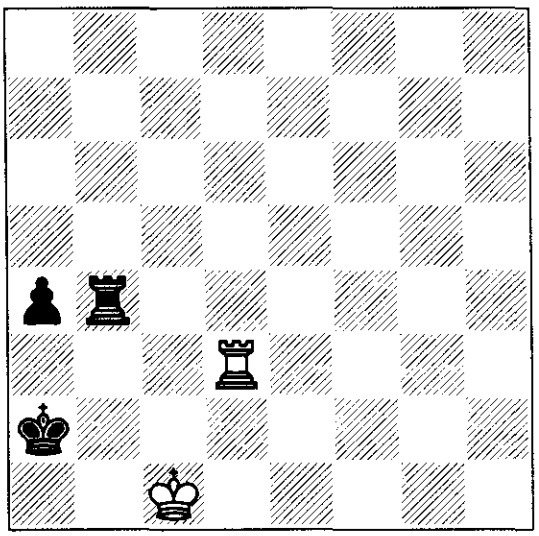


537 B

**Ricardi – Kotronias**

*Erevan Olympiad, 1996*

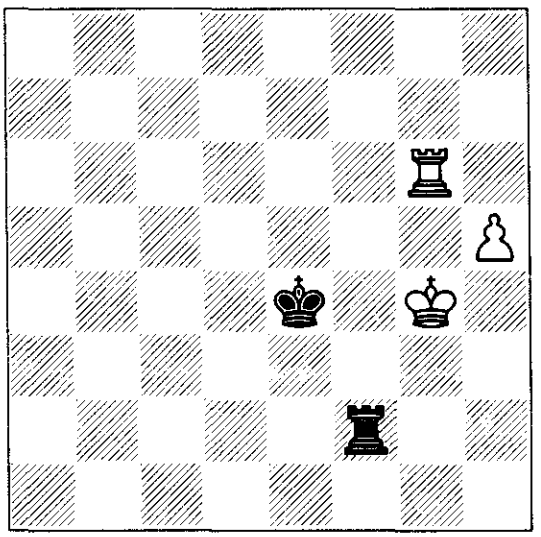
Another Vancura test. What is the unique drawing move for Black?



538 B

**Blatny – Keitlinghaus**
*Lazne Bohdanec, 1996*

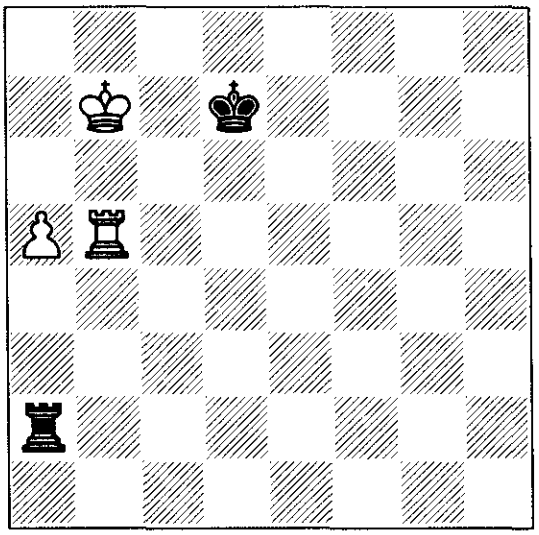
Can Black win this position?



540 W

**Ernst – Bagirov**
*Helsinki, 1992*

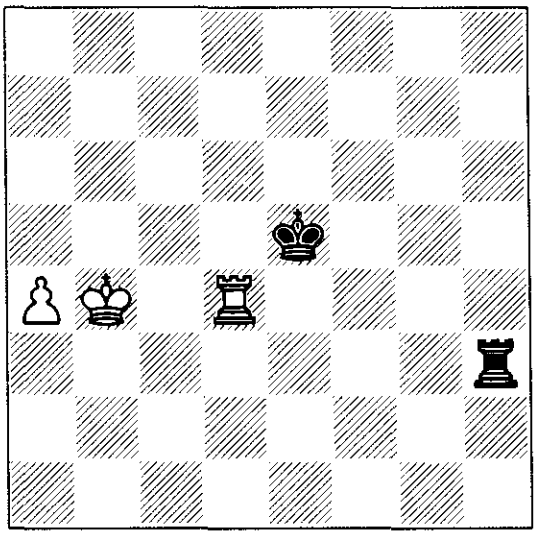
In the game White found the correct winning plan. What are the first two moves of this plan?



539 B

**Kholmov – Tibensky**
*Mlada Boleslav, 1995*

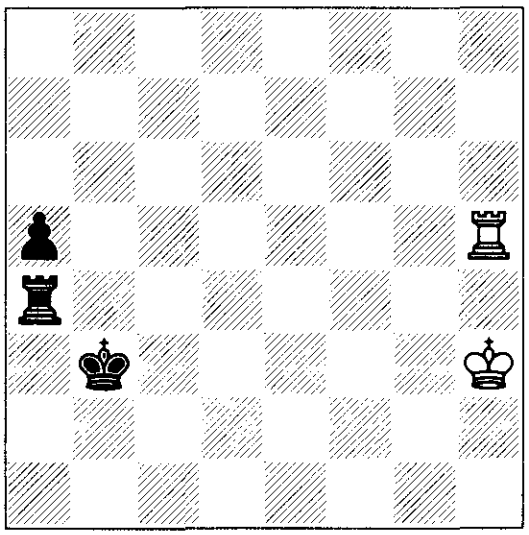
Black found the only move to draw. What was it?



541 W

**Ward – K. Müller**
*Hamburg, 1992*

Black's last move was ...♔f6-e5, attacking the rook. In the game, Chris Ward did not find the only winning square for the rook. Can you do any better?

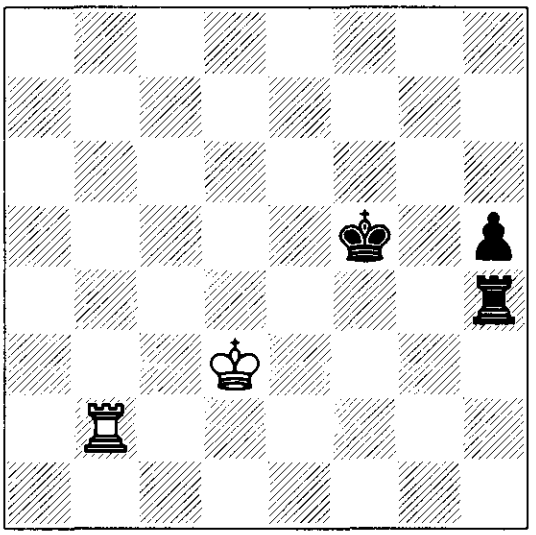


542 B

**Emms – Riemersma**

*Gausdal, 1993*

Find Black's unique winning move. Riemersma failed to solve this quite difficult problem.

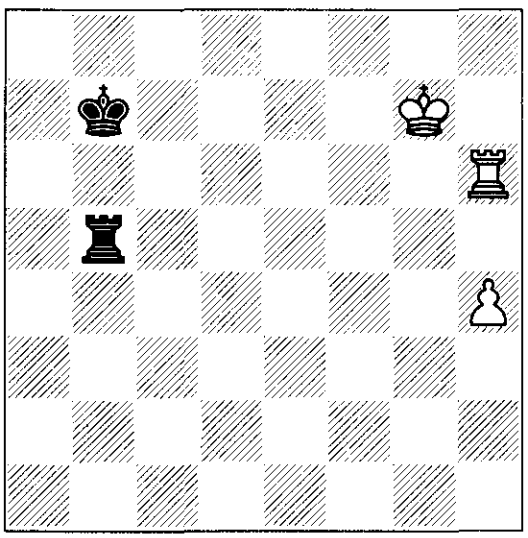


544 B

**Lautier – Salov**

*Madrid, 1993*

In this position Valery Salov found a sequence of 11 consecutive 'only' moves to win the game. Your challenge is to find the first two moves of the solution.

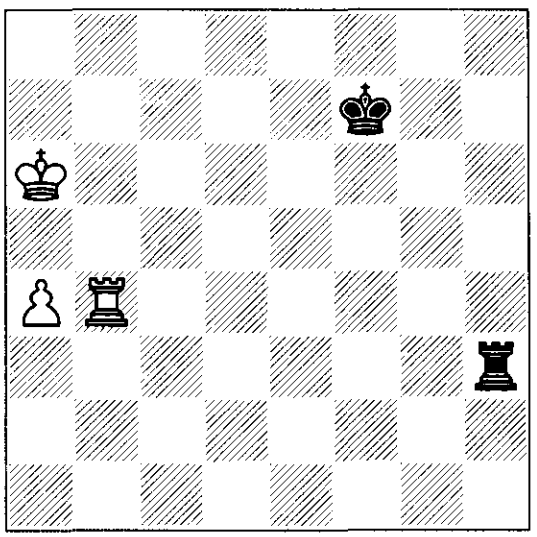


543 B

**H. Grünberg – Jackelen**

*Bundesliga, 1992/3*

Is it possible for Black to draw this position?

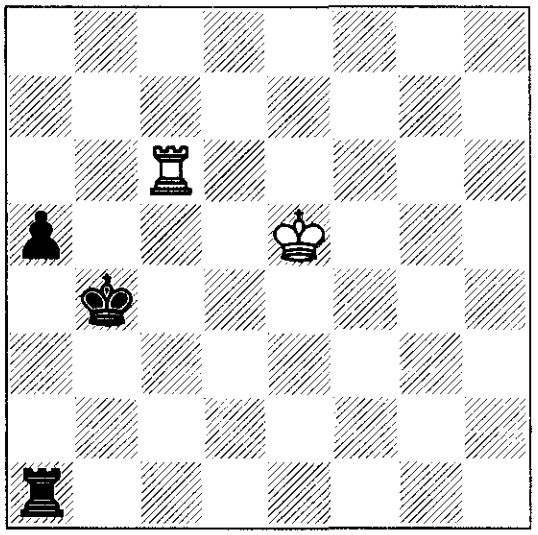


545 B

**Novikov – B. Lalić**

*Manila Olympiad, 1992*

Lalić successfully found Black's only drawing move. Can you do the same?

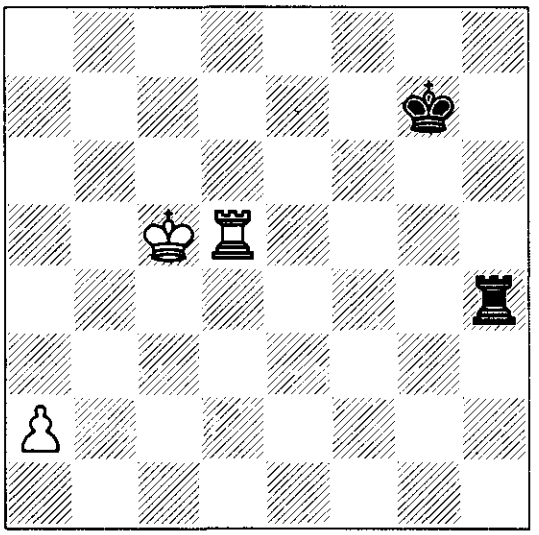


546 W

**Ibragimov – Korneev**

*Linares Open, 1994*

This position is drawn, but it demands high-quality defence. What should White have played here?

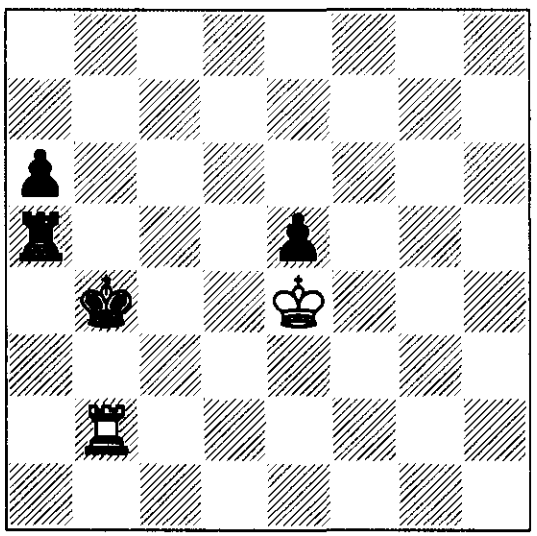


548 W

**Sunye Neto – Van Riemsdijk**

*São Paulo Zonal, 1993*

Sunye did not find White's unique winning move. Can you do better?

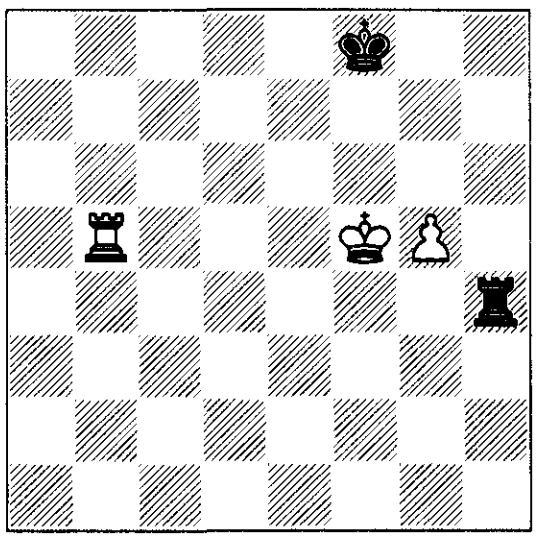


547 B

**Tzermiadianos – Atalik**

*Greek Team Ch, 1996*

Black must give up a pawn to make progress. 1...♔c3 2 ♖b6 ♖a4+ 3 ♔xe5 and 1...♔c5 2 ♔xe5 are two possible methods. Which is correct? In the game Atalik made the wrong choice.

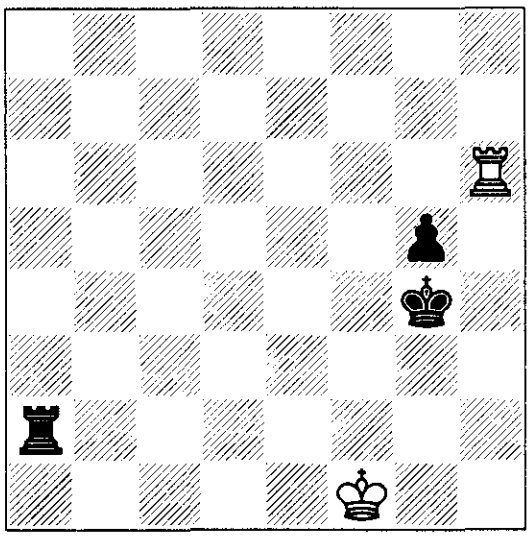


549 B

**Polaczek – Lazarev**

*Biel Open, 1992*

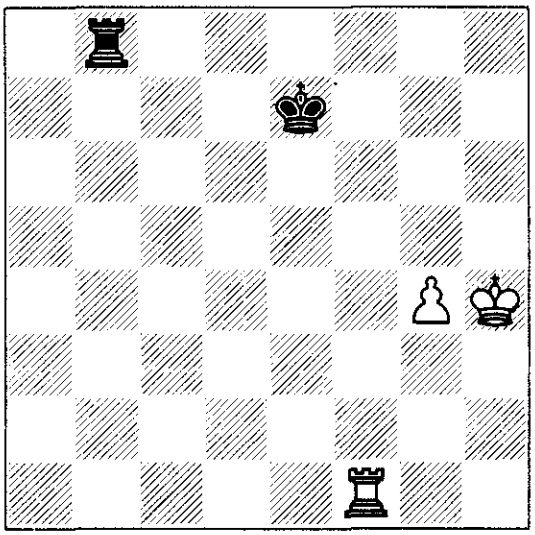
Can Black save this position?



550 W

**Ulybin – Bashkov**
*Cheliabinsk, 1993*

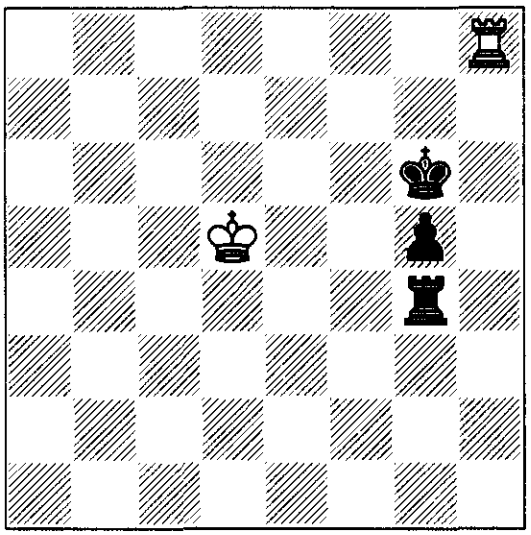
In the game, Ulybin overlooked White's only drawing move. Can you do better?



552 W

**Hellers – Rozentalis**
*Malmö, 1997*

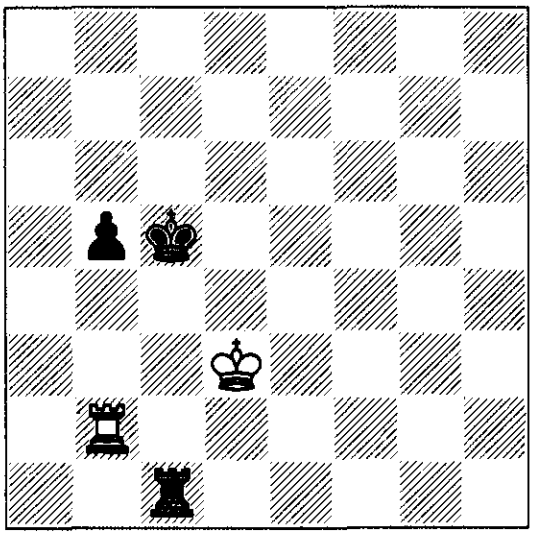
In this position, Hellers found the unique winning move for White. Can you do the same?



551 W

**Hübner – Shirov**
*Wijk aan Zee, 1996*

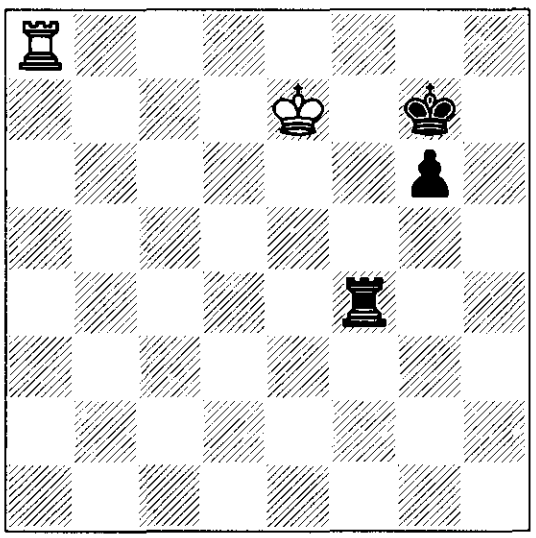
White's king is cut off along a rank. Is this advantage sufficient for Black to win the game?



553 W

**Farago – C. Horvath**
*Hungarian Ch (Budapest), 1995*

What is the only move to draw for White? In the game White played a different move and lost.

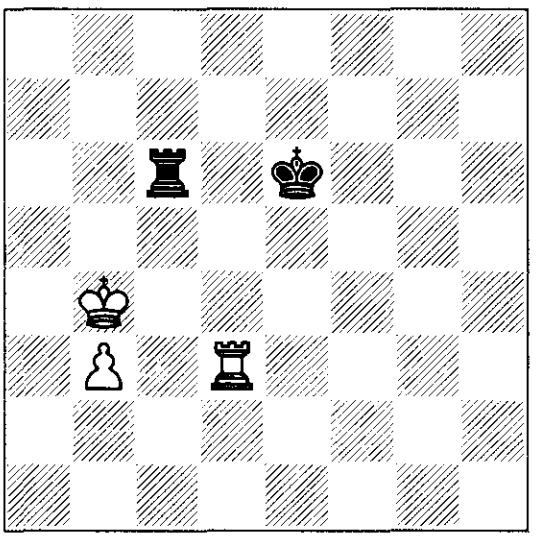


554 W

**Arlandi – Bukal**

*Reggio Emilia, 1991/2*

Evaluate the position.

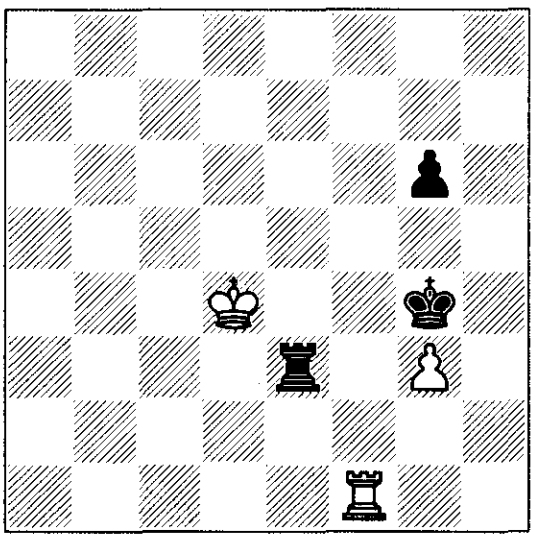


556 B

**Groszpeter – Nikčević**

*Cannes, 1996*

What should Black play here? There is only one correct move.

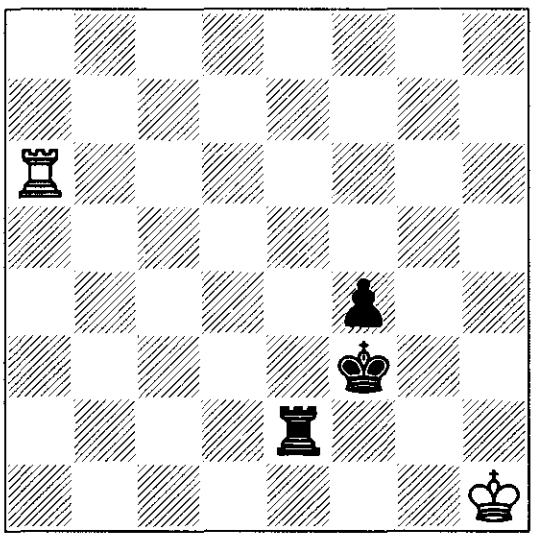


555 B

**Zsu. Polgar – Vaganian**

*Groningen PCA Qualifier, 1993*

Black can choose between 1...♖xg3, capturing the pawn immediately, and 1...♖f3, delaying the capture. Which is better?

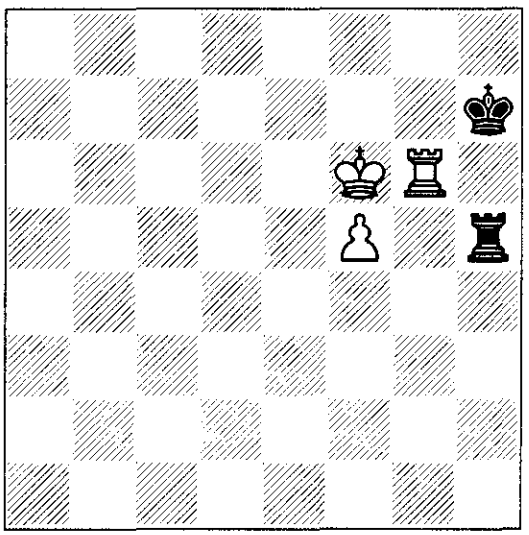


557 W

**Rõtšagov – P.H. Nielsen**

*Asker, 1997*

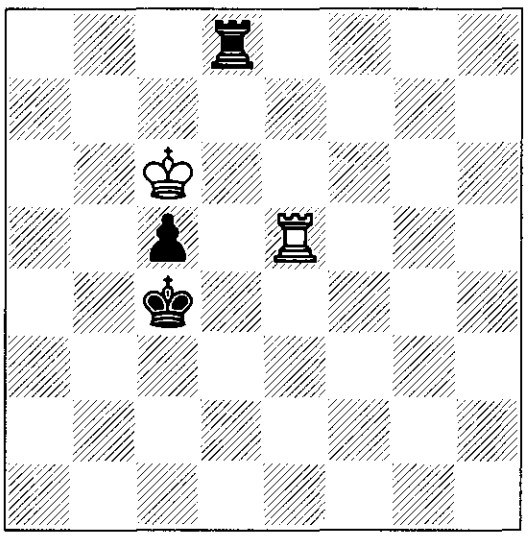
Here White played 1 ♖a1. Was this a good move?



558 B

**Urban – Sznapik**
*Slupsk, 1992*

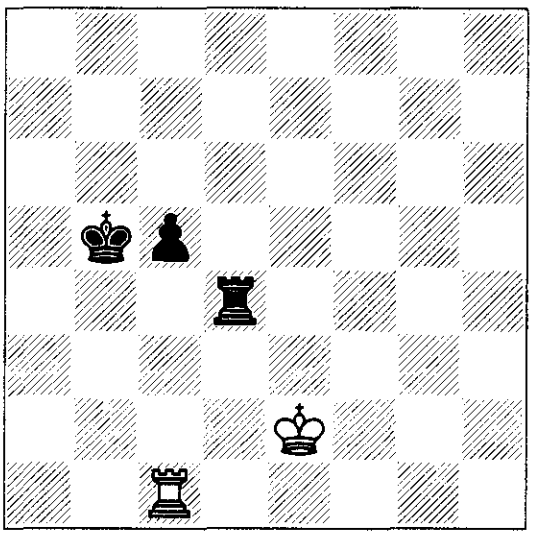
Black's best plan is to transfer his rook to the a-file. The game continued 1...♔h8, intending ...♖h7-a7. Was this correct?



559 B

**Kazhgaleev – Itkis**
*Orel, 1994*

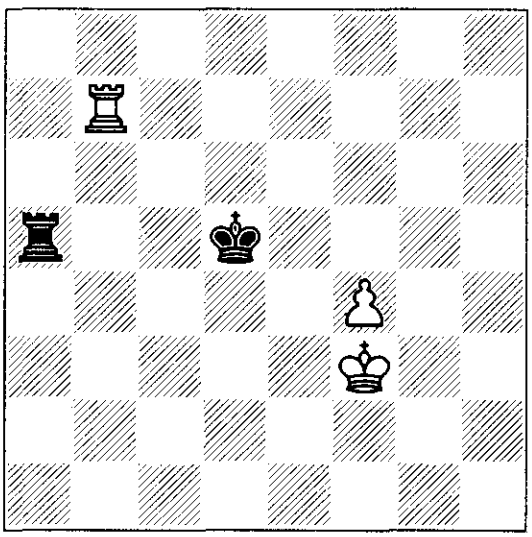
Black's pieces are clumsily placed, but if he can free them there will be nothing to stop the pawn's advance. What is Black's unique winning move?



560 W

**Danielian – Miles**
*Cappelle la Grande, 1994*

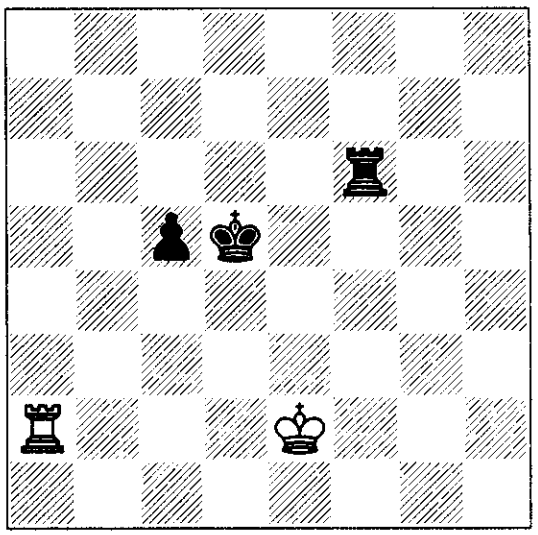
Evaluate the position.



561 W

**Tukmakov – A. Sokolov**
*Biel, 1992*

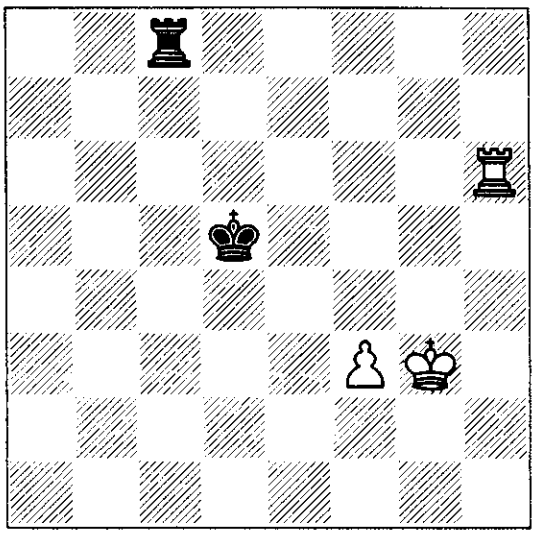
In the game Tukmakov found the unique winning move for White. Can you do the same?



562 B

**Schulze – Tompa**
*2nd Bundesliga, 1995*

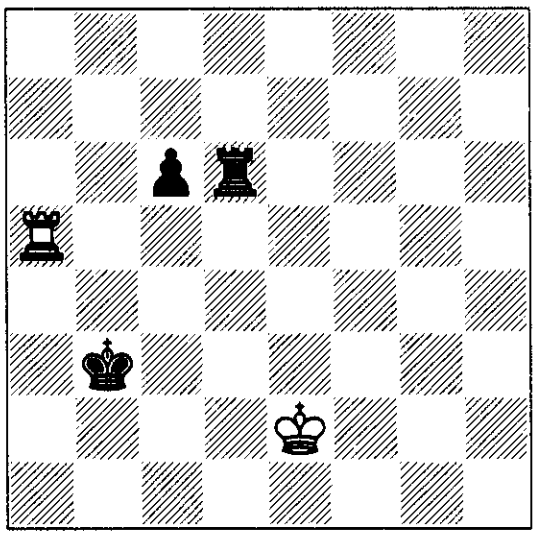
Is this position winning for Black?



564 W

**Brodsky – Nikolenko**
*Katowice, 1993*

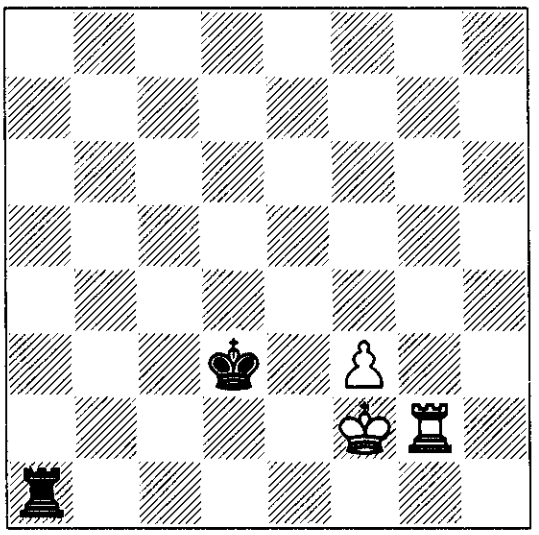
Find the unique winning move for White.



563 W

**Arencibia – Vladimirov**
*Leon, 1991*

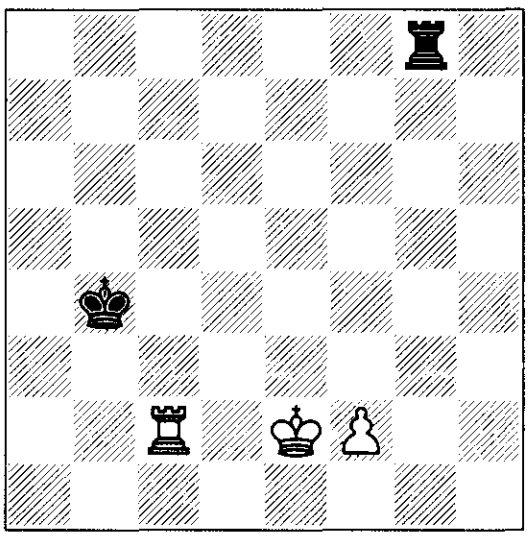
White has only one move to draw. What is it?



565 B

**Hergott – Gild. Garcia**
*Linares (Mexico), 1994*

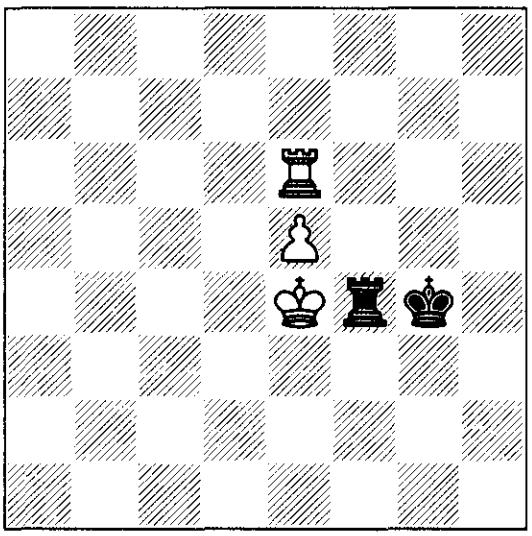
This position is a draw, but in the game Black did not find the only move to save the game. What was it?



566 W

**Löffler – K. Müller**
*Hamburg, 1996*

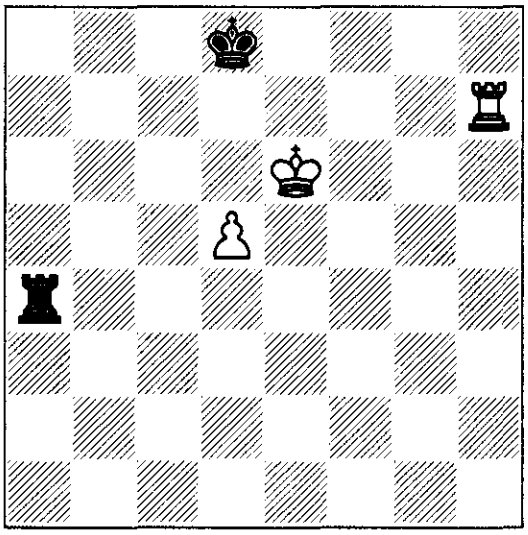
There are two possible winning moves for White in this position. In the game White found one of these. Can you do the same?



568 W

**Alburt – Dlugy**
*USA Ch (Los Angeles), 1991*

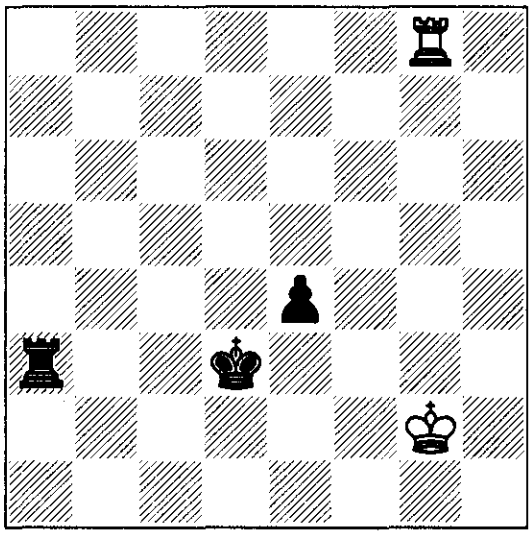
Evaluate the position.



567 B

**Kupreichik – Sulskis**
*Minsk, 1996*

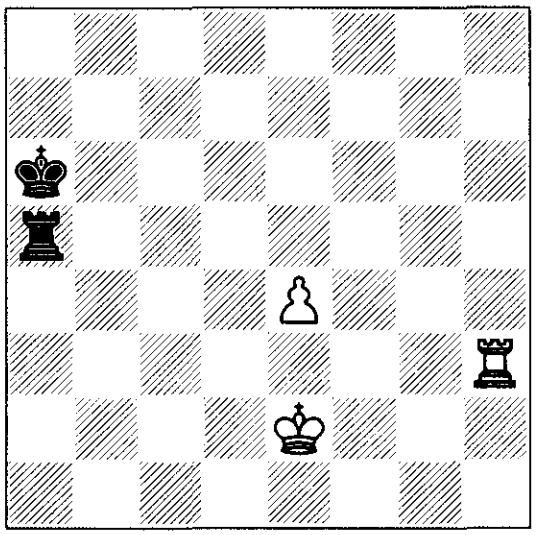
Black has only one drawing move. Can you do better than Sulskis and find it?



569 W

**Vaulin – Voitsekhovsky**
*Russia Cup (Sochi), 1997*

In the game White missed the unique drawing move and lost. How should he have continued?

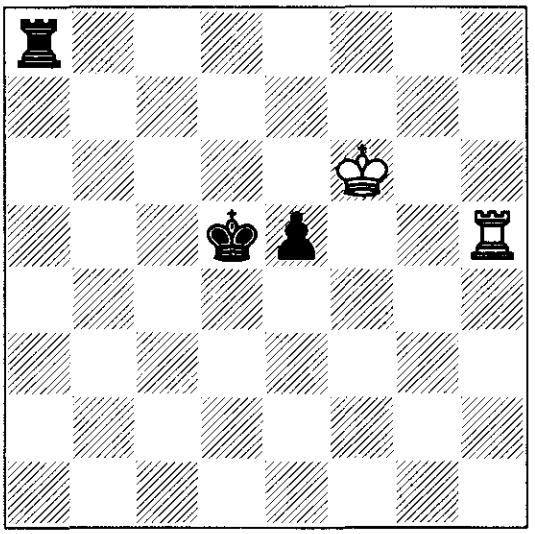


570 B

**Xu Jun – Alterman**

*Erevan Olympiad, 1996*

There are two possible drawing moves for Black. Can you do better than Alterman and find one of them?

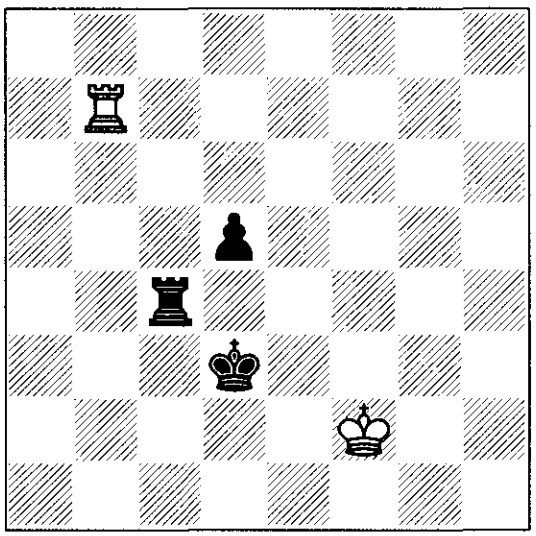


572 B

**Romanishin – Anand**

*PCA Candidates (7), New York 1994*

Black has three reasonable moves: 1...♖f8+, 1...♖e8 or 1...♖a6+. Which is correct? In the game Anand made the wrong choice.

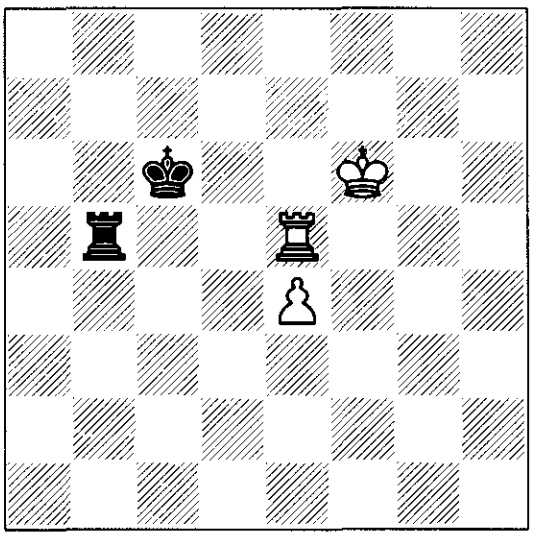


571 W

**Bukić – G. Mohr**

*Slovenian Team Ch, 1993*

There are two possible drawing moves for White in this position. Your task is to find one of them.



573 B

**Yakovich – Kindermann**

*Munich, 1991/2*

Is this position winning for White?

# Solutions to Exercises

*(535):* No, it was a very bad move. A quick glance at the position is enough to show that Black's winning prospects are poor. His king is far away from the pawn, and White has plenty of time to set up a Vancura draw (see diagram 34). In fact, Black could not win even if it were his turn to move. However, this type of position (a-pawn on the sixth rank with the attacking rook in front of the pawn) seems to be one that is regularly mishandled in practice. White should leave his king on g2 or h2, but players seem to feel a near-irresistible temptation to move the king towards the queenside, even though ♔e2 is impossible because then ...a2 promotes the pawn.

**1 ♔f2?**

1 ♖f7 is an easy draw, amongst many other moves. After 1...♖a2+ 2 ♔g3 (not 2 ♔f3? ♔b8! 3 ♔g3 ♖b2 and White cannot play ♖a7) ♖b2 (2...♔b8 3 ♖f3 is a standard Vancura draw) 3 ♖a7! a2 4 ♔f3 ♔b8 5 ♖a3 ♔b7 6 ♔e3 ♔b6 7 ♔d3 ♔b5 8 ♔c3 White's king is in time.

**1...♔b8! 2 ♖a6**

Or 2 ♖a4 ♔b7 3 ♔g2 (White cannot transfer his rook to the third rank while the king is on f2) ♔b6 4 ♖f4 ♖b1 5 ♖a4 ♖b2+ 6 ♔f3 a2 and Black wins.

**2...♔b7 3 ♖a4 ♔b6 4 ♖a8 ♔b5**

Black wins by hiding his king at a2 and then extracting his rook from the passive square a1.

**5 ♖b8+ ♔c4 6 ♖c8+ ♔b3 7 ♖b8+ ♔a2 8 ♔e3 ♖b1 9 ♖d8 ♔b2 10 ♖d2+ ♔c1 11 ♖h2 ♖b2 12 ♖h1+ ♔c2 13 ♖h2+ ♔b3 14 ♖h8 a2 0-1**

*(536):* No, this position is a draw because White's king is simply too far away from the h-pawn. It is a matter of two tempi rather than one, because even after White's next move he is not threatening to win.

**1 ♔c4 ♔c7**

This move does not lose, but 1...♖h5 would have been simpler: 2 ♔d4 (2 ♖g7+ ♔c6) ♔c7 3 ♔e4 ♔d7 4 ♔f4 ♔e7 5 ♔g4 ♖h1 is an easy draw.

**2 ♖g8**

The best chance; White transfers his rook in front of the pawn and hopes for a Romanovsky win. Had Black played 1...♖h5, this manoeuvre would have been impossible.

**2...♖h5! 3 ♖h8**

Threatening 4 ♔d4, since Black cannot reply 4...♖f5 (aiming for ...♖f6 and a Vancura draw) owing to 5 h7 ♖h5 6 ♖a8, exploiting the black king's poor position on c7.

**3...♔c6?**

3...♔b7 is logical (reaching the position arising in diagram 36 after 1...♖a5), and in fact it is the only move to draw. The main line runs 4 ♔d4 ♖f5 5 ♖h7+ ♔b6! – see diagram 36 for the details.

**4 ♔d4 ♖h1**

Black needs to be able to transfer his rook to his third rank in order to

reach a Vancura draw, but he can only do this when his king is on b7 or a7 (here 4...♖f5 loses to 5 h7).

**5 ♔e5**

Now the king cannot be prevented from reaching h7.

**5...♔b7 6 ♔f6 ♔c7 7 ♔g7 ♔d7**

After this White can win without playing ♔h7 and freeing his rook.

**8 h7 ♖g1+ 9 ♔f6 ♖f1+ 10 ♔e5 ♖e1+ 11 ♔d4 1-0**

After the eventual ...♖h1, White replies ♖a8.

*(537):* Here we have exactly diagram 38. Of course, Black has to head for the Vancura draw, but he cannot do so immediately because 1...♖f1+? 2 ♔e5! ♖f6 (other moves also lose) fails to 3 ♖g8+.

**1...♔f7?**

Most of the routes to the third rank are not viable because the active position of the white king makes a check on a7 very awkward. Thus 1...♖b1? loses to 2 ♖a7+ ♔h6 3 ♖b7. The only drawing line is 1...♖a5+! 2 ♔e6 (or 2 ♔e4 ♖b5 3 ♖a7+ ♔g6! 4 ♖b7 ♖a5! 5 a7 ♔f6!, etc.) ♖h5! (but not 2...♖g5? 3 ♖a7+! ♔g8 4 ♔f6! ♖a5 5 ♔g6 ♔f8 6 ♖a8+ ♔e7 7 a7 and the pawn will promote). Then both 3 ♖a7+ ♔g8! and 3 ♔d6 ♖h6+! 4 ♔c7 ♖f6! lead to a draw – for more details see diagram 38. This defence is far from obvious and it is not really surprising that Black missed it.

**2 ♔e5**

The king now has a free path towards a7.

**2...♔g7 3 ♔d5 ♖f1 4 ♖b8 ♖a1 5 ♖b7+ ♔f6 6 a7 1-0**

*(538):* Yes, this position is winning for Black.

**1...♖c4+!**

The obvious move and not surprisingly the only one to win.

**2 ♔d1 ♔b1**

2...♔b2! also wins, and in somewhat simpler fashion, for example 3 ♖d8 ♖b4 4 ♖d2+ (or 4 ♖c8 a3 5 ♖c2+ ♔b3) ♔b1! 5 ♖d3 ♖b3 and the pawn advances.

**3 ♖d8**

Or 3 ♔d2 ♔b2 4 ♖d8 ♖c2+! 5 ♔d1 ♖c3 6 ♖d2+ (6 ♖b8+ ♖b3! 7 ♖c8 ♖d3+ 8 ♔e2 ♖c3) ♔b1 7 ♖d8 ♖c1+ 8 ♔d2 ♖c2+! 9 ♔d1 a3 10 ♖b8+ ♖b2! 11 ♖c8 ♖b7 and wins.

**3...♖b4?**

After this the position is a draw. 3...♖c1+! transposes into the winning line of the previous note.

**4 ♖d3?**

White misses it. 4 ♔d2! would have saved the game, e.g. 4...a3 (4...♔b2 5 ♖c8! draws by diagram 110) 5 ♔c3! ♖b7 6 ♖d1+ ♔a2 7 ♖d2+ ♖b2 8 ♖d1 and Black cannot make progress.

**4...♖b3 0-1**

Suddenly White cannot prevent the pawn's advance.

*(539):* Black found the best move.

**1...♖c2!**

Black reaches diagram 110 (it makes no difference whether the rook is on c1 or c2).

**2 a6 ♖c7+! 3 ♔b6 ♖c6+! 4 ♔a5**

This position is essentially the same as one discussed in diagram 78.

**4...♖c7**

This retains the draw, but now the position requires fairly accurate play by Black. The simplest method is that given in diagram 78, namely 4...♖c1 5 a7 ♔c7! 6 a8♘+ ♔c6 (Black doesn't even have to defend ♖+♘ vs ♖, as he

can force the exchange of rooks) 7 ♖b6+ (7 ♘b6 ♖c5) ♔c5 8 ♔a6 ♖a1+ 9 ♔b7 ♖xa8.

**5 ♖h5 ♖c1?**

This defence no longer works. The only way to draw is 5...♔c6! 6 ♖h6+ ♔c5!, when White cannot make progress, for example 7 ♖h1 ♔c6! 8 ♖c1+ ♔d7.

**6 a7! ♔c7 7 ♖h7+!**

Now White has this check, which displaces Black's king.

**7...♔d6 8 ♔a6 1-0**

As 8...♖a1+ 9 ♔b7 ♖b1+ 10 ♔c8 ♖c1+ 11 ♔b8 wins.

*(540):*

**1 ♖e6+!**

The natural move, driving the black king one file further away.

**1...♔d5 2 ♖e8!**

The key move. White will meet Black's checks by hiding his king in front of the pawn. Eventually, White will have his king on h7 and pawn on h6. At this point White needs to play ♖g8 to free his king, hence his rook belongs on the eighth rank. Black's king is too far up the board to displace the rook by ...♔d7.

**2...♖h2 3 ♔g5! ♔d6**

The black king rushes back to kick the rook away, but it is just too late. If 3...♖g2+, then 4 ♔f6 ♖f2+ 5 ♔g7 ♖g2+ 6 ♔h7 ♔d6 7 h6! ♔d7 8 ♖g8 wins as in diagram 30.

**4 h6! ♖g2+ 5 ♔f6 ♖f2+ 6 ♔g7 ♖g2+ 7 ♔h8**

With the pawn already on h6, this is even quicker than playing ♔h7.

**7...♔d7 8 ♖g8! ♖h2**

8...♖f2 9 h7 ♔e6 10 ♔g7! transposes to the game.

**9 h7**

9 ♖g6 followed by ♔g7 and h7 is even simpler.

**9...♔e6 10 ♔g7!**

White wins as in diagram 2.

**10...♖g2+ 11 ♔f8! ♖f2+ 12 ♔e8! ♖a2 13 ♖g6+! ♔f5 14 ♖f6+ ♔g5 15 ♖f8 1-0**

*(541):*

**1 ♖d2?**

Missing the winning idea that Ernst found in the preceding position. The point is that Black will defend by checking from White's first rank, forcing the white king in front of the pawn. Eventually, White will have his king on a7 and pawn on a6. Then White would like to free his king with ♖b8. If the rook is already on the eighth rank then White can play ♖b8 without loss of time. If it is anywhere else on the d-file, then Black can use the extra tempo to play ...♔e6-e7, preventing the ♖d8-b8 manoeuvre. 1 ♖d8! ♖h1 2 a5! ♖a1 3 ♔b5! ♖b1+ 4 ♔c6 ♖c1+ 5 ♔b7 ♖b1+ 6 ♔a7 ♔e6 7 a6! ♔e7 8 ♖b8! wins as in diagram 540.

**1...♖h1 2 a5 ♖a1**

2...♖b1+ leads to the same thing.

**3 ♔b5 ♖b1+ 4 ♔c6 ♖a1?**

It is the wrong time to stop checking, as White's king is actively placed (i.e. not confined to the a-file). Black should have played 4...♖c1+! 5 ♔b7 ♖b1+ 6 ♔a7 ♔e6! (Black is just in time to prevent ♖d8-b8) 7 a6 (or 7 ♖d8 ♔e7 8 ♖b8 ♖a1 9 a6 ♔d7) ♔e7!, drawing as in diagram 30.

**5 ♔b6?**

Missing 5 ♖d5+!, which would have transferred White's rook to a better position with gain of tempo. White wins after 5...♔e6 (or 5...♔e4 6 ♖b5 ♔d4 7 ♔b6 ♖h1 8 a6 ♖h6+ 9 ♔a5) 6

♖c5! (6 ♖b5? ♖c1+! 7 ♔b7 ♔d7! draws by diagram 110) ♔e7 7 ♔b7 ♖b1+ (or 7...♔d7 8 ♖d5+! ♔e6 9 ♖b5, followed by a6) 8 ♔c7! ♖a1 9 ♖e5+ ♔f6 10 ♖b5 ♔e6 (10...♔e7 11 ♔b6 ♔d7 12 a6 also wins) 11 ♖b6+ ♔e7 12 a6.

**5...♖b1+!**

Now the position is again a draw and Black makes no further mistakes.

**6 ♔a7 ♔e6! 7 ♖d8 ♔e7 8 ♖b8 ♖c1 9 a6 ♔d7 10 ♖h8 ♔c7 11 ♖h7+ ♔c8 ½-½**

*(542):*

**1...♖a1?**

The obvious move, yet it throws away the win. 1...♖a2? also fails after 2 ♖g5 (see the following note for details). The winning move is 1...♖a3! and now:

1) 2 ♔g4 ♔b4 and White has no check on the fourth rank so the black rook is freed.

2) 2 ♖g5 ♔b4+ is the key point; Black defends his pawn with gain of tempo and thereby frees his rook.

3) 2 ♔g2 and now there are two winning plans, both instructive. The first is 2...a4 3 ♖h3+ ♔b2 4 ♖h4 ♖a2!, repeating the earlier motif one file down. The other is 2...♖a2+ 3 ♔f1 (3 ♔f3 a4 4 ♖h8 a3 5 ♖b8+ ♔c2 6 ♖c8+ ♔b1 wins) a4 4 ♖h3+ ♔c2 5 ♖h2+ ♔b1 6 ♖h4 a3 7 ♖a4 ♔b2 8 ♖b4+ ♔c3 9 ♖a4 ♔b3.

**2 ♔g2?**

Trying the bring the king across is quite hopeless. White must try to set up a Vancura draw, and he must do it now while the black rook is still trapped on the a-file: 2 ♖g5! a4 3 ♖g3+! ♔c2 4 ♖g2+! ♔c3 (Black's only chance to avoid an immediate Vancura draw is to play his king to f1) 5 ♖g3+! ♔d2 6 ♖g2+ ♔e3 7 ♖g3+! ♔f2 8 ♖g2+! ♔f1 9 ♔h2 ♖d1 10 ♖a2 ♖d4 11 ♔g3 ♔e1 12 ♔f3! ♔d1 13 ♔e3! ♖h4 14 ♔d3 ♔c1 15 ♔c3 ♔b1 16 ♖g2 and White draws.

Note that 2 ♖f5? is wrong as the rook will be undefended when it starts checking from the side. Black wins by 2...a4 3 ♖f3+ ♔c2 4 ♖f2+ (or 4 ♖f4 a3 5 ♖f2+ ♔d3 6 ♔g3 ♖e1) ♔d3 5 ♖f4 a3! 6 ♔g2 reaching diagram 40 (see there for the conclusion).

2 ♖b5+? is also bad in view of 2...♔a4! (2...♔c3? gives White a second bite at the cherry) 3 ♖b8 (3 ♖g5 ♖b1 4 ♔g2 ♖b5 5 ♖g3 ♔b4 wins) ♖a3+ 4 ♔g2 ♖b3 (releasing the king) 5 ♖a8 ♖b5 6 ♖f8 ♔b3 7 ♖f3+ ♔a2 8 ♔f2 a4 9 ♔e2 a3 and wins.

**2...a4 3 ♔f2**

It is now too late to reach a Vancura draw as Black's rook is free to emerge, e.g. 3 ♖f5 ♖b1 4 ♖f3+ ♔a2, winning easily.

**3...a3 4 ♖b5+ ♔a2 5 ♔e2 ♖b1 6 ♖d5 ♔b2 7 ♖d2+ ♔b3 8 ♖d3+ ♔a4 9 ♖d4+ ♖b4 10 ♖d8 a2 11 ♔d3 ♔b3 0-1**

*(543):* Yes, Black can draw.

**1...♔c7**

Black decides to draw by approaching the pawn with his king. The pawn is so far back that even this plan should be sufficient. However, the diagram position already has the makings of a Vancura draw and, by analogy with the previous diagram, Black could have drawn easily by 1...♖b4 2 h5 ♖b5! 3 ♖h7 (the only chance – as we saw in the previous diagram, once Black plays ...♔a7 or ...♖c5 the position is a dead draw; however, even

after the text-move only one accurate move is required) ♔a6 (Black must avoid the ♔g6+ and ♖f7 manoeuvre; unlike the Emms game, in which the defender's rook was on the edge file, here moving the king to the edge gives the rook a free checking range, and so the position is a draw) 4 ♔g6 ♖b6+! 5 ♔f5 ♖b5+! 6 ♔f6 ♖b6+ 7 ♔e5 ♖b5+ 8 ♔d6 ♖b6+.

**2 ♖g6**

Or 2 h5 ♔d7 3 ♖h7 (3 ♖h8 ♔e7 is a draw) ♔e6 4 h6 ♖b7+ drawing.

**2...♔d7**

This draws, but only with very accurate play. 2...♖h5 is simpler, for example 3 ♖g4 ♔d6! 4 ♔g6 ♖h8 5 ♖a4 (5 h5 ♖g8+! 6 ♔f5 ♖xg4) ♖g8+ 6 ♔f6 ♖f8+ 7 ♔g7 ♖f1 8 h5 ♖g1+!.

**3 ♖g5 ♖b7!**

3...♖b1? 4 h5! wins.

**4 ♔f7**

4 h5 ♔e6+! 5 ♔g6 ♖b8! is a draw.

**4...♔d6+! 5 ♔f6 ♖b4?**

Not far enough! 5...♖b3? is also too close: 6 h5! ♖f3+ 7 ♔g7! ♔e7 8 ♖e5+! ♔d6 9 ♖e4 ♖g3+ 10 ♔f6 ♖f3+ 11 ♔g5 ♖g3+ 12 ♔h4 ♖g1 13 h6! wins. The simplest draw is 5...♖b1 (5...♖b2 is also sufficient), to give the maximum distance when checking from behind. Then 6 h5 ♖f1+! 7 ♔g7 ♔e7! 8 ♖e5+ ♔d6! 9 ♖e4 ♖g1+! 10 ♔f6 ♖f1+ draws comfortably.

5...♖e7 draws by an entirely different method: 6 h5 (or 6 ♖g6 ♖h7 7 ♔g5+ ♔e7) ♖e6+! 7 ♔f7 ♖e7+! 8 ♔f8 ♖a7 9 h6 ♔e6! 10 ♖h5 ♔f6!.

**6 h5! ♖f4+ 7 ♔g7! ♔e7 8 ♖e5+! ♔d6 9 ♖e1?**

This gives Black a chance to draw by increasing his checking distance. 9 ♖e2? is also too far, and 9...♖g4+ 10 ♔f6 ♖f4+! 11 ♔g5 ♖f1! leads to a draw. One win is 9 ♖e3 ♖f1 (9...♖g4+ 10 ♔f6) 10 h6 ♖g1+ 11 ♔f6 ♖f1+ 12 ♔g5 ♖g1+ 13 ♔h4, while 9 ♖a5 also does the trick after 9...♖g4+ 10 ♔f6 ♖h4 11 ♖a6+ ♔d7 12 ♔g5 ♖h1 13 h6!.

**9...♖g4+**

The immediate 9...♖f2 is also good.

**10 ♔f6 ♖f4+ 11 ♔g5 ♖f2 12 h6**

12 ♖e4 ♖g2+! draws as in the note to Black's 5th move.

**12...♖g2+! 13 ♔f6 ♖f2+! 14 ♔g6 ♖g2+! 15 ♔f7**

15 ♔h7 ♔d7!, preventing ♖e8-g8, draws.

**15...♖f2+! 16 ♔e8 ♖h2! 17 ♖a1 ♖e2+! 18 ♔d8 ♔e6 19 h7 ♖h2 ½-½**

*(544):* White's king is not too far away from the enemy pawn but, owing to the poor position of the b2-rook, Black can cut White's king off along a rank.

**1...♖h3+! 2 ♔d4 ♖a3!**

2...h4? is tempting, but this allows White a subtle draw by 3 ♖f2+! ♔g4 4 ♔e4! ♖a3 5 ♖g2+! ♖g3 6 ♖f2! h3 (6...♖g1 7 ♖f4+! ♔g3 8 ♖f3+! ♔g2 9 ♔f4! h3 10 ♖g3+! ♔h2 11 ♖a3 draws) 7 ♖f4+! ♔g5 8 ♖f5+ ♔h4 9 ♖f8 ♖g1 (9...♖g4+ 10 ♔f3!) 10 ♖h8+! ♔g3 11 ♖g8+! ♔f2 12 ♖f8+! ♔e2 13 ♖a8 ♖g4+ 14 ♔f5!, and White's pieces are too active.

**3 ♖f2+**

3 ♖b8 h4! 4 ♖f8+ ♔g4! 5 ♔e4 ♔g3! transposes to the game.

**3...♔g4! 4 ♔e4 ♔g3! 5 ♖f8 h4! 6 ♖g8+ ♔f2! 7 ♖f8+ ♔g2! 8 ♖g8+ ♖g3! 9 ♖a8 ♖f3!**

The rook occupies a square from which it can counter both possible checks with an interposition.

**10 ♖g8+ ♔f2! 11 ♖a8 h3!**

The end of Salov's remarkable run of 11 'only' moves.

**12 ♖a7 ♔g2 13 ♖h7 ♖g3 0-1**

*(545):*

**1...♔e6!**

Accurate defence. 1...♔e7? fails to 2 a5! ♖h8 3 ♔b7! ♔d6 4 ♖c4! ♖h7+ 5 ♔b6! ♖h1 6 ♖d4+ ♔e5 7 ♖b4 ♖h6+ 8 ♔c5! ♖a6 (8...♖g6 9 ♖a4) 9 ♔b5 ♖a8 10 a6, while 1...♖h8? 2 ♖e4! ♔f6 (2...♖a8+ 3 ♔b7 ♖a5 4 ♔b6 and 2...♖b8 3 a5 also win) 3 a5 wins as in diagram 91.

**2 a5**

2 ♖d4 ♖b3 is drawn.

**2...♖h8**

There is one other drawing move, namely 2...♖d3; for example, 3 ♔b7 ♖d7+! 4 ♔c8 ♖a7 5 ♖a4 ♔d6 6 ♔b8 ♖h7 7 a6 ♔c6! is a clear draw.

**3 ♔b7 ♔d5!**

The point. Black's king is not cut off along the c-file as after 1...♔e7?.

**4 ♖g4**

4 a6 ♔c5! 5 ♖g4 ♖h7+! and 4 ♖b5+ ♔c4! 5 ♖g5 ♖h7+ are no better.

**4...♔c5**

Or 4...♖h7+ 5 ♔b6 ♖h6+! 6 ♔b5 ♔d6! 7 ♖c4 ♖h1.

**5 ♖g7 ♖h6!**

Otherwise White wins by pushing his a-pawn.

**6 a6**

6 ♖g5+ ♔b4! 7 a6 ♖h7+! draws.

**6...♖b6+! 7 ♔a7 ♖b1 8 ♖b7 ♖a1!**

**½-½**

*(546):*

**1 ♔e4?**

The logic here is that White must start checking from behind as soon as possible. If he can do so while the black pawn is still on a5, then Black's king will have to go in front of the pawn at a3 (because ...♔a2 would just lose the pawn after ♖a8). Later Black will have to play ...♔a2 in order to advance the pawn. If, on the other hand, White waits until the pawn is on a4 before he starts checking, then Black's king can hide one square further up the board, at a2. The effect of this is that Black gains a tempo. A second point is that White's checks must come from the maximum possible distance (i.e. the eighth rank), otherwise Black's king can stop the checks by approaching the rook.

1 ♖c8! is the only drawing move, when Black has two options:

1) 1...a4 2 ♖b8+! (here the checks are also effective; Black can hide his king on a2, but this doesn't help as White's king is not yet cut off) ♔c5 (2...♔c3 3 ♖c8+! ♔b2 4 ♖b8+! ♔a2 5 ♔d4 draws) 3 ♖c8+! ♔b6 (or 3...♔b5 4 ♖b8+! ♔c6 5 ♔d4) 4 ♔d4 a3 5 ♖a8 a2 6 ♔c3! winning the pawn.

2) 1...♖d1 (Black spends a tempo cutting off the king) 2 ♖b8+! ♔a3 3 ♔e4! (now White has an extra tempo and his king reaches e2 just in time) a4 4 ♔e3! ♔a2 5 ♔e2 ♖b1 (if the rook stays on the d-file, then we have a draw by diagram 1) 6 ♖a8 a3 7 ♔d2 ♖b7 8 ♔c2 drawing.

It is worth noting that 1 ♖c7? loses to 1...♖d1 2 ♖b7+ ♔c5 3 ♖c7+ ♔b6 4 ♖c8 a4!, followed by hiding on a2, when Black wins as explained above.

**1...♖d1! 2 ♔e3**

2 ♖b6+ ♔c4 3 ♖c6+ ♔b5 4 ♖c8 is no better as after 4...a4! Black is once again in a position to hide on a2.

**2...a4! 3 ♖b6+ ♔c3**

Black loses time. He must not hide on a2 when White's rook is still on the

sixth rank, as this would give White the extra drawing tempo he needs (by omitting ♖b8 or ♖c8). First the king must retreat to attack the rook.

**4 ♖c6+ ♔b4**

Black realizes that 4...♔b2 5 ♖b6+ ♔a2? 6 ♔e2! draws, and returns to the correct path.

**5 ♖b6+ ♔a5**

Gaining time to push the a-pawn.

**6 ♖b8 a3! 7 ♖a8+ ♔b4! 8 ♖b8+ ♔c3 9 ♖c8+ ♔b2 10 ♖b8+ ♔a1 11 ♖a8**

Or 11 ♔e2 ♖b1!.

**11...a2 12 ♔e2 ♖b1 13 ♔d3 ♔b2! 14 ♖b8+ ♔c1 15 ♖c8+ ♔d1 16 ♖h8 ♖b3+ 17 ♔c4 ♖c3+ 18 ♔d4 ♖a3 0-1**

*(547):*

**1...♔c5?**

This is the wrong way to give up the e-pawn, as on c5 Black's king is not really supporting the advance of the a-pawn. Instead, 1...♔c3! 2 ♖b6 (or else ...♖c5 followed by ...a5) ♖a4+ 3 ♔xe5 a5! wins fairly comfortably. As in the game, White's king is cut off along a rank, but here Black's king is in a much better position. The finish might be 4 ♔d5 (4 ♖h6 ♖g4 5 ♖h3+ ♔b4 and 4 ♖a6 ♖h4, followed by ...a4, are hopeless) ♖d4+ 5 ♔c5 a4! 6 ♖a6 ♖c4+ 7 ♔d5 ♔b3, followed by ...♖b4 and ...a3.

**2 ♔xe5**

According to Atalik's notes in *Informator 66*, Black's last move was a brilliant ploy to reach a winning ♖+♙ vs ♖ position. Unfortunately, the position he was aiming for is actually a draw, which makes the idea appear significantly less brilliant. Indeed, White has several ways to hold the half-point.

**2...♖a4**

'–+' according to Atalik. Although White's king is cut off along a rank, a number of other factors operate in White's favour: his king is relatively close, and Black's pawn is a long way back.

**3 ♖c2+**

3 ♖b8 also draws, and in somewhat simpler fashion than the text, since White at once implements his main line of defence – checking from behind. After 3...♖h4 4 ♖c8+ ♔b4 5 ♖b8+! ♔c3 6 ♖c8+! (sooner or later Black must interpose his rook, when ♖a8 becomes playable; not 6 ♖a8? a5!, however) ♖c4 7 ♖a8! ♖a4 8 ♖c8+, etc.

**3...♖c4 4 ♖a2! ♔b5 5 ♔d5 ♖b4 6 ♖h2**

The correct plan; White must at some stage transfer his rook to the eighth rank to start checking from the rear. If he does not do this, Black will gradually creep forwards by ...a5, ...♖b3, ...♔b4, ...a4, etc. Of course, White would have had an easier job if he had decided to transfer his rook to the eighth rank earlier, thereby saving considerable time.

**6...a5 7 ♖h8 ♖g4 8 ♖b8+!**

White takes the opportunity to force Black's king in front of the pawn. He must not delay, since 8 ♖a8? loses to 8...♔b4! 9 ♖b8+ ♔c3! 10 ♖c8+ ♔b3 11 ♖b8+ ♔a2 and the king moves to the a-file well ahead of the pawn. This saves time because the king does not have to edge down the a-file ahead of the pawn.

**8...♔a4 9 ♖b1**

9 ♔c5 ♔a3 10 ♖h8 also draws, as Black has little protection against sideways checks. One line is 10...♖b4

11 ♖h3+ ♖b3 12 ♖h1, when Black cannot advance the pawn.

**9...♔a3 10 ♖a1+?**

Only this move loses. White quite unnecessarily allows Black to advance his pawn without extracting any concession. 10 ♔c5 a4 11 ♔b5 ♔a2 12 ♖h1 draws as Black cannot arrange any protection against sideways checks.

**10...♔b2! 11 ♖f1 a4! 12 ♖f2+**

White's king is not yet on c5, so Black can escape the checks by fleeing to b4.

**12...♔b3 13 ♔c5**

Too late.

**13...♖c4+ 14 ♔d5 a3 15 ♖f3+ ♖c3 16 ♖f8 a2 0-1**

*(548):* This is one of the very rare interesting practical examples with ♖+♙a2 vs ♖.

**1 ♔b5?**

This throws away the win. The key point is that White always wins if his pawn is on a4 and his rook cuts off Black's king along the f-file. Thus 1 ♖d4! is correct, and now:

1) 1...♖h8 2 ♖f4 (now Black cannot prevent a4, when White wins by diagram 128) ♖c8+ (2...♖h5+ 3 ♔b4) 3 ♔b6 ♖b8+ 4 ♔c7, followed by a4.

2) 1...♖h5+ 2 ♔b6 ♔f6 (2...♖h2 3 a4! ♖b2+ 4 ♔a6 ♔f6 5 ♖e4!, followed by pushing the pawn to a7, wins as in diagram 2) 3 a4 ♔e5 4 ♖d8 ♖h6+ (or 4...♔e6 5 a5! ♖h1 6 a6! ♖b1+ 7 ♔a7 ♔e7 8 ♖b8!) 5 ♔b5 ♖h1 6 a5! ♖b1+ 7 ♔c6 ♖c1+ 8 ♔b6 ♖b1+ 9 ♔a7 ♔e6 10 a6 ♔e7 11 ♖b8! wins.

**1...♔f6**

Now the black king gets as far as the e-file, too close for White to win.

**2 a4 ♔e6 3 ♖d1**

3 ♖d3 ♖h1 4 a5 ♖b1+! also draws.

**3...♖h2 4 a5 ½-½**

After 4...♖b2+ 5 ♔c4 ♖a2 6 ♔b4 ♔e7 White cannot make progress, because as soon as he advances his king, Black checks it in front of the pawn.

*(549):* No, the position is lost. One might assume it to be drawn, because when Black's king is in front of a b- or g-pawn, the position is a draw even if his rook is confined to the first rank. Here, however, owing to the poor position of Black's pieces, he cannot transfer his rook to the first rank, and so loses. Had Black's king been on g8 rather than f8, then he could have drawn as White's king would not have access to h7 as in the game.

**1...♖a4**

Or 1...♔g7 2 ♖b7+! ♔f8 (2...♔g8 3 ♔g6! ♔f8 4 ♖b8+ ♔e7 5 ♔g7 reaches the Lucena position) 3 ♔g6 ♖g4 4 ♖b8+ ♔e7 5 ♖g8 winning as in diagram 213.

**2 ♔g6! ♖a6+**

Otherwise White wins by 3 ♖b8+ and 4 ♔g7. If 2...♖a8, then 3 ♔h7! ♖a7+ transposes to the game.

**3 ♔h7! ♖a7+ 4 ♔h8**

Threatening 5 g6.

**4...♔f7**

Or 4...♖a6 (4...♖a1 5 ♖f5+!) 5 ♖f5+ ♔e7 6 ♔g7 followed by g6.

**5 ♖b6! ♖a1 6 ♖f6+**

6 g6+ ♔e7 7 g7 reaches the Lucena position more quickly.

**6...♔e7 7 ♔g7 ♖a8 8 g6 ♖a1 9 ♖f2 ♖e1 10 ♔g8 ♖e3 11 g7 ♖e1 12 ♖h2 ♖a1 13 ♔h7 1-0**

*(550):*

**1 ♖b6?**

1 ♖g6! was the only move to draw; then 1...♔f3 (otherwise Black cannot

make progress) 2 ♔g1! g4 3 ♖f6+! ♔g3 4 ♖f1! reaches a standard g-pawn draw.

**1...♔g3!**

Now there is no avoiding diagram 213.

**2 ♖b3+**

2 ♖b1 ♔h2 is the same.

**2...♔h2! 3 ♖b4**

3 ♖b8 g4 is effectively diagram 213.

**3...♖g2 4 ♖c4 g4 5 ♖c8 ♖g1+ 6 ♔e2 g3 0-1**

Since the Lucena position is now inevitable.

*(551):* Yes, Black can win. He must aim for either diagram 257 or diagram 259.

**1 ♖g8+**

White's only hope is to check the enemy king at once, because once Black has moved his rook to f4, he can evade such checks by ...♔h5-g4.

**1...♔h7**

Because of the position of his rook, Black's king must retreat. 1...♔h6 2 ♖h8+ ♔g7 3 ♖a8 ♖h4 is equivalent.

**2 ♖a8**

Now White hopes to cut Black's king off along the sixth rank, but Black finds the correct reply.

**2...♖h4**

Preparing to free the king by ...♖h6.

**3 ♖a6 ♖h6!**

The only winning method. Black has to concede one rank to the white king, but he is still in time to return to h3 with his rook and reach diagram 257.

**4 ♖a7+ ♔g6! 5 ♔e4**

5 ♖a6+ ♔h5 6 ♖a1 g4 7 ♔e4 ♖f6 also wins.

**5...♖h3**

Black reaches his target position.

**6 ♖a1 0-1**

*(552):* This is essentially diagram 244. White's winning method depends on Black's unfavourable king position. However, in this exact situation White would also win if Black's king were to start on e6, because after 1 g5! Black would be unable to offer an exchange of rooks.

**1 ♖f4!**

Here, however, 1 g5 would be a mistake because of 1...♖f8.

**1...♖h8+ 2 ♔g5! ♔e6**

Black is too slow to dislodge the rook from f4.

**3 ♔g6 ♔e5 4 ♖f5+**

4 ♖a4 is quicker, but the text-move is safe.

**4...♔e4**

4...♔e6 5 ♔g7 ♖h4 6 ♖f6+ followed by g5 wins.

**5 ♖f6**

Now the black king is cut off along a rank.

**5...♖g8+ 6 ♔h5 ♖h8+ 7 ♖h6 ♖f8 8 g5 ♔e5 9 ♖a6 1-0**

*(553):* We know that with a b-pawn on the fourth, the defending king must be cut off by three files to guarantee victory. Here White's king is cut off by only one file, so despite the fact that White's rook is not optimally placed, we can be pretty sure that the result is a draw. However, it should be noted that if the pawn advances to b4, then a one-file cut-off is enough to win, except if White can offer the immediate exchange of rooks.

**1 ♖b3?**

A serious error. White makes absolutely no effort to stop Black advancing

his pawn. 1 ♔d2! was the only move to draw. Black could then try:

1) 1...♖h1 (Black threatens to exchange rooks) 2 ♖b3! (2 ♔c3? ♖h3+! wins) ♔c4 (or 2...b4 3 ♖g3) 3 ♖g3 b4 4 ♔c2 drawing.

2) 1...♖c4 2 ♔d3! (2 ♖b1? b4! 3 ♖c1 b3! wins) and now 2...b4 allows an immediate draw by 3 ♖c2!, so Black cannot make progress.

**1...b4!**

As White cannot exchange rooks, the result is a win for Black.

**2 ♔d2**

2 ♖b2 ♖c3+ 3 ♔d2 ♔c4 4 ♖c2 ♔b3! and Black wins.

**2...♖c4! 3 ♖b1**

3 ♔d3 ♔b5 frees the rook, whereupon Black wins by ...♖c8 followed by ...♔a4.

**3...♔b5 4 ♖a1**

4 ♖c1 b3! 5 ♖xc4 ♔xc4! 6 ♔d1 ♔d3 also wins.

**4...b3 5 ♖a8 ♔b4 0-1**

Black will force the Lucena position within a few moves.

*(554):* A quick look at diagrams 271 and 272 shows that White is totally lost in this position.

**1 ♔e6 ♖e4+**

This does not yet throw away the win, but it is heading in the wrong direction. 1...g5 is the simplest route to victory. With his king cut off along a rank, there is nothing White can do to prevent the gradual advance of Black's king and pawn, e.g. 2 ♖a1 ♔g6 3 ♔e5 ♖b4 4 ♖h1 g4, etc.

**2 ♔d5 ♖e1?**

But this really does throw the win away. 2...♖h4, reverting to the plan mentioned above, would still have won.

**3 ♖a2!**

Given his chance, White finds the only move to draw. We know from section 2.5.2 that if the defender's king is cut off by only two files, then the result is very often a draw.

**3...g5**

Or 3...♔h6 4 ♖h2+! ♔g5 5 ♖g2+! and Black cannot make progress.

**4 ♖a6!**

Excellent defence. In fact, this situation (defending king cut off along a file, attacking king cut off along a rank) is usually a draw even if the defender's king is cut off by three files (see diagram 248).

**4...♔f7 5 ♔d4 g4 6 ♔d3**

White need only wait, but he has to take some care. 6 ♔d5? is a mistake as it gives Black's rook access to e3; after 6...g3! 7 ♖a2 ♔f6! 8 ♖g2 ♖e3! 9 ♔d4 ♖a3 10 ♔e4 ♔g5! White's king cannot approach.

**6...g3 7 ♖a2 ♔f6 8 ♖g2**

Here this is a clear draw.

**8...♖a1 9 ♔e4 ½-½**

The lesson from this example is the general point that it is better for the attacker to cut the opposing king off along a rank than along a file.

*(555):*

**1...♖xg3?**

The obvious move, but it allows a surprising draw. The key point is that almost all positions with the pawn on g5 and the white king cut off along the third rank are winning for Black (see diagram 257). However, the analysis of diagram 276 with White to play shows that the defender can sometimes save the game by counterattacking the pawn with his king. 1...♖f3 would have won, as Black gains two

extra options. The first is to play ...g5 before taking the pawn on g3, and the second is to take the pawn with his king, thereby ruling out the type of counterattack which occurs in the game. The following lines are all winning for Black:

1) 2 ♖g1 ♖xg3 3 ♖h1 g5.

2) 2 ♖e1 g5 3 ♖e5 (3 ♔e4 ♖xg3) ♖xg3.

3) 2 ♖h1 g5 3 ♔e5 ♔xg3 (but not 3...♖xg3? 4 ♔f6 drawing) 4 ♖g1+ ♔h4 5 ♖h1+ ♖h3.

4) 2 ♖a1 g5 3 ♔e5 ♔xg3.

**2 ♔e5!**

The only saving move. After other moves Black wins by 2...g5; for example, 2 ♔e4 g5 3 ♔e5 (this is now too late) ♖f3 4 ♖g1+ ♔h4 5 ♖h1+ ♖h3 6 ♖f1 g4 7 ♔f4 ♖h2 and the pawn edges forwards.

**2...♔g5**

The point of White's defence lies in the line 2...g5 3 ♔f6!, when Black's rook cannot leave the g-file. If 2...♔h4, then 3 ♖h1+ ♔g5 4 ♔e6.

**3 ♔e6!**

3 ♖h1? ♖g4 is diagram 276, line 1.

**3...♔h6**

3...♖g4 4 ♔f7! and 3...♔h4 4 ♖h1+ ♔g4 5 ♔f6 are no better.

**4 ♖h1+! ♔g7 5 ♔e5**

White draws because her rook occupies the h-file – see diagram 271.

**5...♖g4 6 ♖h2 ♖b4 7 ♖h1 ½-½**

*(556):*

**1...♖c8!**

Absolutely correct and the only drawing move, reaching diagram 286 (with Black to play). It is interesting to note that 1...♖c7? is not far enough and loses after 2 ♔b5! ♖c8 3 ♖h3, as in line 2 of diagram 286.

**2 ♔b5 ♖b8+?**

This casual check throws the draw away. 2...♔e5!, threatening 3...♖b8+ 4 ♔c6 ♔e4, would have saved the game. White can try 3 ♖h3 (3 b4 ♖b8+! 4 ♔c4 ♖c8+! 5 ♔b3 ♖b8! draws as in diagram 241), but then 3...♖b8+! 4 ♔c6 (after 4 ♔c5 ♖c8+! 5 ♔b6 ♖b8+, for 6 ♔c6 see 4 ♔c6, while 6 ♔c7 ♖b4! 7 ♔c6 ♔d4 8 ♖g3 ♖b8! is a draw) ♔d4! (4...♖b4? loses to 5 ♔c5! ♖b8 6 ♖h5+ ♔e6 7 ♖h6+ ♔d7 8 ♖h7+ ♔e6 9 b4) 5 ♔c7 ♖b4 6 ♔c6 ♖b8 draws.

**3 ♔c5?**

Returning the compliment. 3 ♔c6! ♖c8+ 4 ♔b7 ♖c5 5 ♔b6 ♖c8 6 ♖h3 ♖b8+ (6...♔d5 7 ♖h5+! ♔d4 8 b4! ♖b8+ 9 ♔a5! ♖a8+ 10 ♔b5! ♖b8+ 11 ♔a4 ♖a8+ 12 ♔b3 wins by diagram 259) 7 ♔c7 wins as in line 2 of diagram 286.

**3...♖c8+! 4 ♔b6 ♖b8+?**

4...♔e5! would still have drawn, as in the note to Black's second move.

**5 ♔c7**

This is considerably simpler than 5 ♔c6 transposing into the note to White's third move.

**5...♖b4 6 ♔c6 ♔e5**

6...♖b8 7 ♖d6+ ♔e5 8 ♖d5+ ♔e6 9 ♖b5 is exactly diagram 273.

**7 ♔c5**

This does win, but few players would find the very difficult continuation. It would have been much easier to play 7 ♖d5+ ♔e6 8 ♖b5 ♖h4 9 ♖b7, cutting the black king off along a rank, when the pawn could advance without hindrance.

**7...♖b8**

We have reached diagram 284 after Black's 6th move.

**8 b4?**

Since Black's king is on one of the two safe squares (the other being e6), Black can now draw by means of frontal checks. 8 ♖e3+! ♔f4 9 ♖h3! is the only way to win – see diagram 284 for the continuation. 8 ♖h3? transposes into the note to Black's second move.

**8...♖c8+!**

Now Black makes no further mistake.

**9 ♔b5 ♖b8+! 10 ♔c4 ♖c8+! 11 ♔b3 ♖b8! 12 ♖d2 ♔e6!**

We know from diagram 241 that the king must stay on e6 or e5.

**13 ♖d4 ♔e5! 14 ♔c3 ♖c8+ 15 ♖c4 ♖b8! 16 ♖c6**

Threatening 17 ♔c4.

**16...♔d5! 17 ♖a6**

Now the threat is ♔b3-a4.

**17...♖c8+! 18 ♔b3 ♖c6!**

Freeing c6 for the king with gain of tempo.

**19 ♖a7 ♖c1 ½-½**

The draw is clear as White cannot play ♔a4.

*(557):* This position is, of course, completely drawn. White's rook is already poised to give long-range checks from the side (see diagrams 357-9). The only real danger lies in the fact that White's king is currently confined to the first rank, so if Black is allowed to play ...♔g3 in safety, then White's rook may be confined to the first rank by the mating threat. Then White would lose (see diagram 338).

**1 ♖a1?**

Of White's 15 legal moves, no fewer than 11 lead to a draw. If one ignores the two moves that put the rook *en prise*, then only this move and 1 ♖a4? (which also loses to 1...♔g3!) have fatal consequences. 1 ♖a3+ ♔f2 2 ♔h2 is one way to draw, e.g. 2...f3 3 ♖a1 ♖e1 4 ♖a2+, etc.

**1...♖e3?**

Missing 1...♔g3! 2 ♖g1+ ♔h3 3 ♖f1 (or else 3...f3) ♖a2 4 ♖f3+ (4 ♔g1 ♔g3) ♔g4! 5 ♖b3 (5 ♖f1 f3) f3! with an easy win.

**2 ♔g1?**

2 ♔h2 is one way to draw, for example 2...♔f2 3 ♖a4 f3 4 ♖a1! ♖e1 5 ♖a2+.

**2...♔g3!**

Black finds it second time round.

**3 ♔f1 ♖b3**

Not 3...f3? 4 ♖a8, drawing.

**4 ♔g1 f3 5 ♖c1 ♖b2 0-1**

*(558):* This position is certainly drawn as White's pawn is still quite far back and there is a large checking distance available from the a-file. Indeed, the position is still drawn even if it is White to play, so Black is well within the bounds of a draw. However, this does not mean that Black can afford to be complacent. The simplest plan is to transfer the rook to the queenside without delay, e.g. 1...♖h1 2 ♖g7+ (or 2 ♔e6 ♖e1+) ♔h6 3 ♖a7 ♖b1 with a clear draw as Black has an improved version of diagram 357.

**1...♔h8?**

Quite wrong. Black wants to play ...♖h7-a7, but obviously the additional king move makes this plan one move slower than ...♖h1-a1; moreover, the black king occupies an inferior position in the corner.

**2 ♖g1?**

White throws away the momentary winning chance by 2 ♔e6! and now:

1) 2...♖h1 3 ♔f7 (Black's rook is confined to the h-file by the mating threat and White wins as in line 1 of

diagram 357) ♔h7 (3...♖h2 4 f6 is the same) 4 ♖g2 ♔h6 5 f6 wins easily.

2) 2...♔h7 3 ♖g1 ♖h2 4 ♔f7! transposes to line 1.

3) 2...♖h7 3 f6! ♖a7 4 f7! wins as in diagram 326.

**2...♖h7?**

Sticking to his faulty plan once again costs Black a possible draw. The simplest line is 2...♖h2 (Black threatens to draw comfortably by ...♖a2) 3 ♔e6 (3 ♔f7 ♖h7+! 4 ♔e6 ♖a7 is similar) ♖a2 4 f6 ♖a6+ 5 ♔f7 ♖a7+! 6 ♔g6 ♔g8! 7 ♖b1 ♖g7+! 8 ♔f5 ♖g2.

**3 ♖e1!**

Not only threatening mate in one, but also forcing Black to modify his plan of playing 3...♖a7 in view of 4 ♖e8+! ♔h7 5 ♖e7+!. This line explains why 3 ♖e1! wins, whereas 3 ♖d1? ♖a7 only draws.

**3...♖h6+ 4 ♔f7 ♖h7+ 5 ♔f8!**

Black ends up with his rook tied down to the h-file, a situation which we already know guarantees defeat.

**5...♖h6**

Or else White plays f6.

**6 ♖e6! ♖h7 7 ♖g6**

Now the f-pawn can advance freely.

**7...♖h1 8 f6 ♔h7 9 ♖g7+ ♔h8 10 f7 ♖e1 11 ♖g2 1-0**

*(559):*

**1...♖c8+?**

A mistake throwing the win away. The simple tactical point 1...♔b4! releases the pawn and wins easily.

**2 ♔b7!**

Although the position is now a draw, it requires accurate defence. Kazhgaleev doesn't put a foot wrong and obtains a well-earned half-point. 2 ♔d7? ♖h8 wins.

**2...♖h8**

This is Black's idea – he now has a check on the sixth rank, so White cannot maintain his attack against the c-pawn. However, White now has the chance to bring his king back along the a-file and draw by sideways checks on the (very) long side.

**3 ♔b6!**

3 ♔c6? ♖h6+ drives the king away and wins easily.

**3...♖h6+ 4 ♔a5! ♔d4 5 ♖g5**

The correct plan; White sets up the maximum available checking distance.

**5...♖h4**

5...c4 6 ♖g4+ ♔d3 7 ♖g3+ ♔c2 8 ♔b4 also draws.

**6 ♔a4**

The king returns as quickly as possible.

**6...♔d3+ 7 ♔a3 c4 8 ♖g3+ ♔d4 9 ♔b2 ♖h2+ 10 ♔c1 ♔c5 11 ♖f3 ♔b4 12 ♖g3 ½-½**

*(560):* This is a marginal case. We know from diagram 377 that if Black's rook were on d8 then he would be winning. However, the position of the rook on d4 means that White can play ♔e3 without allowing the pawn to advance, and line 1 of diagram 377 shows that with the king on e3, the position is a draw even if Black's rook is on d8. Thus White can draw, but accurate play is necessary.

**1 ♖b1+**

1 ♔e3 is also adequate.

**1...♔a4 2 ♔e3!**

White cannot afford to wait longer to play this, for example 2 ♖a1+? loses after 2...♔b3! (but not 2...♔b4? 3 ♖b1+! ♔a3 4 ♔e3!) and now 3 ♔e3 ♖d8 4 ♖b1+ ♔c2! or 3 ♖b1+ ♔c2 4 ♖b8 c4.

**2...♖d5**

Or 2...♖d8 3 ♖c1! – it is important to play ♖c1 rather than ♖a1+ when Black moves his king to the a-file, as 3 ♖a1+? ♔b3 forces the pawn forward.

**3 ♔e4!**

3 ♖a1+? ♔b3 4 ♔e4 ♖d8 wins.

**3...♖d2**

After 3...♖d8 4 ♖c1! ♔b4 5 ♖b1+! Black cannot make progress.

**4 ♔e3 ♖d6 5 ♖c1! ♔b5 6 ♖b1+! ♔c6**

Black's initial attempts have been rebuffed by White's accurate defence, so Black goes back to c6 for another try.

**7 ♖c1 ♖d7 8 ♔e2?**

A serious error. White does not realize that his king needs to be on e3 or e4 (since Black's rook must not be allowed to settle on d5). Ironically, Black was threatening nothing and White could just have waited, e.g. 8 ♔e4, or even 8 ♖a1, since 8...c4 9 ♖a5 offers Black no winning chances.

**8...♔b5**

Now Black repeats his earlier attempt, but with White's king on an inferior square.

**9 ♖b1+ ♔a4 10 ♖c1 ♔b4 11 ♖b1+ ♔a3 12 ♖c1 ♖d5 0-1**

White is one square too far away to play ♔e4, and so Black has time for ...♔b2, forcing the pawn forward.

*(561):*

**1 ♖b6!**

This is the position discussed at the beginning of section 3.4.1. Black to play can only draw if he can occupy the g-file with his rook. In this particular case, Black's rook is poorly placed and so he loses. Note that 1 ♖e7? only draws after 1...♖a8! 2 ♔g4 ♖g8+ 3 ♔f5 ♖f8+! 4 ♔g5 ♖g8+ 5 ♔h6 ♖f8.

**1...♖a8 2 ♔g4 ♖g8+ 3 ♔f5 ♖f8+ 4 ♔g5 ♖g8+ 5 ♖g6 ♖e8 6 f5 ♔e5 7 ♖g7 ♔d6 8 ♖a7 ♖g8+ 1-0**

*(562):* White's king is fairly close to the enemy pawn, but it is Black to move and he uses the tempo to activate his own king. The position is drawn, but requires accurate defence by White.

**1...♔c4**

The danger is that Black will advance his king, leaving White's king cut off on the long side.

**2 ♖d2!**

The only drawing move. 2 ♔d1? ♔b3 3 ♖a8 c4 4 ♖b8+ ♔c3! 5 ♖c8 ♖f1+ 6 ♔e2 ♖c1, followed by ...♔b2 and ...c3, wins.

**2...♖h6**

The point of White's previous move is that if Black immediately advances his king, i.e. 2...♔c3, then 3 ♖d3+! ♔b4 4 ♔d2 permits White to move his king in front of the pawn.

**3 ♔d1!**

3 ♖d8? ♖h2+ 4 ♔d1 ♔c3! and again White cannot prevent ...c4 combined with ...♖h1+ and ...♖c1.

**3...♔b3**

To prevent ♔c2. Now Black threatens to win either by 4...♖h1+ and 5...♖h2+, or simply 4...c4.

**4 ♖d3+! ♔b2 5 ♖d2+! ♔b1**

Black must manoeuvre so as to prevent ♔c2, so this is the only reasonable way of avoiding perpetual check.

**6 ♖d8**

Again a good move. White could also have drawn by 6 ♖d5 ♖h1+ (or 6...♖c6 7 ♖d8 ♔b2 8 ♔d2 ♔b3 9 ♖b8+) 7 ♔d2! ♖c1 8 ♖d8 ♖c2+ 9 ♔d1! c4 (9...♔b2 10 ♖b8+! ♔c3 11 ♖c8!) 10 ♖b8+! ♖b2 11 ♖c8! ♖b4 12 ♔d2 ♔b2 13 ♖c7.

**6...♖h4 7 ♔d2 ♔b2 8 ♖d5?**

An unfortunate error after a spell of very accurate defence. Black didn't actually have a threat, but with this move White voluntarily deprives himself of a check on the b-file. 8 ♖b8+ ♖b4 9 ♖c8 is a clear draw, since after 9...c4 (or 9...♖c4 10 ♖b8+) 10 ♖c7 Black cannot make progress.

**8...♖c4**

Now White is lost. The main threat is 9...♖c3 followed by 10...c4.

**9 ♔d1**

It is too late to return by 9 ♖d8 due to 9...♖c2+! 10 ♔d1 c4 11 ♖b8+ ♔c3! 12 ♖c8 ♖a2 followed by ...♖a1+ and ...♖c1.

**9...♖c1+ 10 ♔d2 ♖c2+**

It would have been slightly quicker to play 10...♖c3 followed by ...c4.

**11 ♔d1 c4 12 ♖b5+ ♔c3! 13 ♖h5 ♖g2 14 ♖h3+**

14 ♖c5 ♖g1+ 15 ♔e2 ♖c1 is an idea we have already seen several times.

**14...♔b2 15 ♖h8 ♖g1+ 16 ♔e2 c3**

Now Black reaches the Lucena position.

**17 ♖b8+ ♔c2 18 ♔f2 ♖g7 19 ♔e2 ♖e7+ 20 ♔f2 ♔d2 21 ♖d8+ ♔c1 22 ♖c8 c2 23 ♖b8 ♖e5 24 ♖b7 ♔d2 25 ♖d7+ ♔c3 26 ♖c7+ ♔d3 0-1**

*(563):*

**1 ♖c5?**

1 ♖a6? is also bad in view of 1...♔c3 reaching line 2 of diagram 398. The drawing line is 1 ♔e3! ♔b4 2 ♖a1 (2 ♖a6 also draws) c5 (this is line 1 of diagram 377) 3 ♖b1+! ♔a3 4 ♖c1! ♖d5 5 ♔e4!.

**1...♔b4! 2 ♖c1 c5!**

Black wins as in diagram 377 – White's king needs to be on e3 for this position to be a draw.

**3 ♖b1+ ♔a3 4 ♖c1 ♖d5 0-1**

White is too slow to attack the rook with his king. After 5 ♔e3 ♔b2 6 ♖c4 ♔b3 the pawn advances.

*(564):* In this type of position it matters little whether White has an f-pawn or a g-pawn, so most of the results of section 2.5.1 apply. In particular, White usually wins if he can reach a position with king on f5 and pawn on f4, except if there is a possible counterattack by the black king on White's pawn. Black must try to put up resistance by checking from the front. If he plays more passively, White wins by ♔g4, f4, etc.

**1 ♔g4!**

Accurate play. 1 f4? ♖g8+ draws because Black's rook occupies the g-file (see diagram 257), while 1 ♔f4? ♖f8+! 2 ♔g4 ♔e5! stymies White.

**1...♖g8+**

Best. 1...♔d4 2 ♖g6 clears the way for the pawn's advance.

**2 ♔f5! ♔d4**

Black's only hope is the counterattack against the white pawn, but it just fails because White's rook is actively placed. Were the white rook on f6, then Black would draw, but Black cannot reach this position. He can force the rook to f6 by checking on f8, but then he has to move his rook again and has no time for ...♔d4.

**3 f4! ♔e3 4 ♖h3+**

White makes use of his active rook position.

**4...♔d4 5 ♔e6! ♖a8**

Or 5...♖g6+ 6 ♔f7! ♖a6 7 ♖h5! (7 f5? ♔e5! draws) ♖a7+ transposing.

**6 ♖h5 ♖a6+ 7 ♔f7 ♖a7+ 8 ♔g6 ♖a6+ 9 ♔g5 ♖a8 10 f5 ♔e5 11 ♖h6 1-0**

*(565):* The key position here is diagram 392. If White's rook cuts the enemy king off along the fifth rank, then everything depends on the location of Black's rook. If it can take control of the g-file, preventing White's king emerging, then Black draws, but otherwise White wins.

**1...♔d4?**

A mistake allowing White's rook to occupy the optimal square g5, from where it both cuts off the black king and prevents Black's rook occupying the g-file.

1...♖a2+! is the only drawing move. Whichever way White moves his king, he cannot reach his target position. After 2 ♔g3 (2 ♔g1 ♖a8 3 ♖g4 cuts off the black king, but 3...♖a2! also cuts off White's king) ♖a8 (White's king blocks the path of the rook to g5; the rook can still reach the fifth rank, but cannot at the same time occupy the g-file) 3 ♖h2 ♖g8+! 4 ♔f2 ♔d4! 5 ♖h5 ♖g7, White's king is imprisoned.

**2 ♖g5! ♖a8 3 ♔g3 ♖a7**

Black can only wait while White gradually advances.

**4 ♔g4 ♖a8 5 f4 ♖a1 6 ♖e5 ♖g1+ 7 ♔f5 ♖g8 8 ♖e6 ♖f8+**

Or 8...♔d5 9 ♖g6 ♖f8+ 10 ♔g5 followed by f5.

**9 ♔g5 ♖g8+ 10 ♖g6 ♖f8 11 f5 ♔d5 12 ♖e6 ♖g8+ 13 ♔f6 ♖f8+ 14 ♔g6 ♖g8+ 15 ♔f7 ♖g5 16 f6 1-0**

*(566):* Diagrams 418-21 show that the situation with an f2-pawn and two-file cut-off is rather complex, with the result depending on the exact position of the pieces.

The list just before diagram 418 tells us that (with Black to play) White wins if his rook occupies either c1 or c7, but other rook positions lead to a draw. In the game White found one of the two winning squares.

**1 ♖c7**

Although this is somewhat slower than the alternative win with 1 ♖c1 (see diagram 419), it is perhaps less complex. After the text-move White wins as in diagram 420, so we only summarize the analysis here.

**1...♖e8+ 2 ♔d3 ♖d8+ 3 ♔e3 ♖e8+ 4 ♔d4 ♖f8**

4...♖d8+ 5 ♔e5 ♖e8+ 6 ♔f6 wins easily.

**5 ♖b7+**

Now White establishes a four-file cut-off, which guarantees the win by diagram 417.

**5...♔a3 6 ♔e3!**

White has to return to f1 before initiating the next stage of the winning process.

**6...♖e8+ 7 ♔d2 ♖f8 8 ♔e2 ♖e8+ 9 ♔f1 ♖f8 10 ♖b5**

Had Black played 5...♔a4, this plan would not be possible, but White would instead win by 10 ♖b1 – see diagram 417 for details.

**10...♔a4 11 ♖e5**

The best plan. White intends ♔e2-e3, followed by f4, advancing the pawn while cutting the black king off along a rank.

**11...♔b4 12 ♔e2 ♔c4 13 ♔e3! ♖h8 14 f4**

White is winning by diagram 259 (there is no difference between an f-pawn and a g-pawn in the present situation).

**14...♖h1 15 ♔e4 ♖f1 16 f5 ♖f2 17 ♖e6 ♔c5 18 ♔e5 ♖f1 19 ♖e7 ♔c6 20 ♔e6 ♖e1+ 21 ♔f7 ♖f1 22 f6 ♔d6 23 ♔g7 ♖f2 24 ♖e8 ♖g2+ 25 ♔f8 ♔d7 26 f7 ♖g1 27 ♖e4 ♖g2 28 ♖d4+ ♔c6**

**29 ♔e7 ♖e2+ 30 ♔f6 ♖f2+ 31 ♔e6 ♔c5 32 ♖d5+ 1-0**

Very accurate play by White.

*(567):* This position is essentially that after 1 ♔d6? in diagram 468.

**1...♖e4+?**

Black misses the draw by 1...♖d4! 2 ♔d6 (2 d6 ♖e4+!) ♔c8 3 ♖h8+ ♔b7 (the crucial point is that the black rook prevents White advancing the pawn by ♔d7 followed by d6) 4 ♖d8 (4 ♔e6 ♔c7!) ♖h4 with the standard draw in which the defender checks from the long side (see diagram 475).

**2 ♔d6! ♔c8**

2...♔e8 3 ♖h8+! ♔f7 4 ♔d7 is of course hopeless as Black can only check from the short side.

**3 ♖h8+! ♔b7 4 ♔d7!**

Two factors combine to seal Black's fate. The d-pawn is not attacked, so White can immediately push it to the sixth rank, and White's rook occupies the high ground of the h-file. If the rook were on g8 instead, then Black could draw by playing ...♖h4 here.

**4...♖g4 5 d6 ♖g7+ 6 ♔e6! ♖g6+ 7 ♔e7 1-0**

White wins after 7...♖g7+ 8 ♔f6 ♖d7 9 ♔e6 ♖g7 10 d7 or 7...♔c6 8 ♖c8+! ♔d5 9 d7!.

*(568):* This position is a draw. We know from diagram 475 that the position with the white king in front of the pawn and the black rook checking from the long side is a draw, and White is unable to prevent such a situation from arising.

**1 ♔d5 ♔g5**

This does not yet lose, but it would have been simpler to seize the a-file at once by 1...♖a4, so as to ensure the maximum checking distance.

**2 ♖a6**

The best chance to make life awkward for Black.

**2...♖b4 3 ♔e6 ♔g6?**

The natural move, but it loses. Diagram 447 shows that White almost always wins if he can get his pawn to the sixth while keeping his rook on the a-file (unless Black has an immediate draw by checking). Black must strive to prevent this. Curiously, at the moment White is not actually threatening anything, so Black's best plan is just to wait: 3...♖b1 4 ♔e7 (4 ♖d6 ♖a1 5 ♔e7 ♖a7+ 6 ♖d7 ♖a1 7 e6 ♔g6! draws as in diagram 446) ♖b7+! 5 ♔d6 ♔f5 6 e6 ♔f6!, drawing.

**4 ♔e7+! ♔g7 5 ♖a7!**

Accurate play. Now e6 cannot be prevented, so White reaches the standard winning position of diagram 447. Not 5 e6? ♖b7+! 6 ♔d8 (6 ♔d6 ♔f6!) ♔f8 7 ♖a8 ♖e7! with a draw.

**5...♖b8**

Black could have offered more resistance by 5...♖b1 6 e6 ♖b8, reaching diagram 447 with W♖a7. White can win with the typical tempo-losing manoeuvre 7 ♔d6+! (not 7 ♔d7? ♔f6 and the reciprocal zugzwang arises with White to play) ♔f6 (7...♔f8 8 ♔d7! is similar) 8 ♔d7! (this is reciprocal zugzwang with Black to play) ♔g7 9 ♔e7 and now Black must give way.

**6 e6**

Now White's task is even easier because he does not have to manoeuvre to lose a tempo.

**6...♔g6**

After this White can exploit the fact that the black king has lost contact with f8.

**7 ♖a1 ♖b7+ 8 ♔d6 ♖b6+ 9 ♔d7 ♖b7+ 10 ♔c6 ♖b8**

10...♖b2 11 ♖e1 is the key line; Black cannot play ...♔f8.

**11 ♔c7 ♖h8 12 e7 1-0**

*(569):* This is a marginal case. The fact that White's king is on the short side helps him, but on the other hand Black's pawn is relatively far advanced and his rook occupies the important a-file. It turns out that White can draw, but accurate play is needed.

**1 ♖d8+?**

1 ♖e8! is correct, when 1...e3 (or 1...♔e3 2 ♔f1 ♖a1+ 3 ♔g2 ♖e1 4 ♖a8 drawing by diagram 475) 2 ♔f3! ♔d2 3 ♖e7 (White can only wait) ♖d3 4 ♖e8 ♖d7 5 ♖a8! (seizing the maximum checking distance; 5 ♖b8? e2 6 ♖b2+ ♔d3 7 ♖b3+ ♔c2 8 ♖e3 ♔d1! wins) ♖f7+ (or 5...e2 6 ♖a2+! ♔d3 7 ♖a3+!) 6 ♔g2 draws.

**1...♔e2! 2 ♖b8**

Relatively the best.

**2...♖a2!**

We know from diagram 447 that in general Black wins when his pawn is on the sixth and his rook is on the a-file. This move prevents a disturbing check by the white rook and gives Black time to push his pawn. The position is now essentially the same as in the previous solution (after 5 ♖a7!). The details are given there, so here we content ourselves with just the main line.

**3 ♖b1**

3 ♖b7 e3 4 ♖b1 offers more resistance.

**3...e3 4 ♔g3**

White cannot avoid weakening his position. The defect of this move will soon be apparent.

**4...♖a8 5 ♖b2+ ♔d3 6 ♖b3+ ♔d2 7 ♖b2+ ♔c3 8 ♖b7 ♖e8**

Now ♔f1 is impossible.

**9 ♖b1 ♔d2**

Certainly not 9...e2? 10 ♔f2!.

**10 ♖b2+ ♔c1 0-1**

*(570):* White's pawn is not too far forward and cannot advance for the moment. On the other hand, Black's king is on the edge of the board and occupies the long side. In fact the position is drawn, but one move is enough to change the evaluation.

**1...♖a2+?**

White's intention is clearly to cut the black king off along a file, but this is the wrong way to counter White's plan as it drives his king into a more active position. One drawing plan is 1...♔b6 2 ♖d3 (2 ♔f3 ♔c6 3 ♔f4 ♔d6 and 2 ♖c3 ♖c5 are also fine for Black) ♔c6 (2...♖h5 also draws, just as after 1...♔b7) 3 ♔e3 ♖a8! as Black's king is on the favourable square c6 (see diagrams 500 and 501). Alternatively, 1...♔b7 2 ♖c3 ♖h5! draws by a completely different method. White's king cannot advance, as Black exchanges rooks, but if the rook quits the third rank, Black plays ...♖h3 and cuts the white king off along a rank.

**2 ♔f3! ♔b7 3 ♔f4 ♔c7 4 ♖d3!**

Black's king is cut off by just one file, but his rook is so poorly placed that his position is hopeless.

**4...♖a8**

As a matter of fact, Black would lose here even if it were his move (although with the king on c6, Black to move would draw).

**5 ♖d4 ♖f8+ 6 ♔g5 ♖g8+ 7 ♔f5 ♖f8+ 8 ♔e6 ♖f4 9 ♖d7+ ♔c8 10 e5 ♖h4 11 ♖d1 ♖h6+ 12 ♔f7 1-0**

*(571):* Black's pawn is a long way back, but other factors in the position – the active black king, and the fact that White can only check on the short side – are worrying for White. In fact the position is a draw, but the defence is by no means easy.

**1 ♖a7?**

White prepares to start checking, but this move is a fatal error. There are just two drawing moves: 1 ♖d7 d4 2 ♔e1! ♖c1+ 3 ♔f2 ♖d1 is diagram 472, where White draws by 4 ♖a7!. The other possibility is 1 ♔e1 ♖c1+ 2 ♔f2 d4 3 ♖d7! ♖d1 (3...♔c3 4 ♔e2!) 4 ♖a7!, again with diagram 472.

**1...d4 2 ♖a1**

This plan draws when the defending king is on the short side, but here it fails.

**2...♔d2 3 ♔f3 d3**

There is nothing White can do to prevent the inexorable advance of the black pawn.

**4 ♖a2+ ♖c2! 5 ♖a3 ♖c8**

This is not the quickest winning plan, but it is entirely adequate.

**6 ♖a2+ ♔c3 7 ♖a3+ ♔c2 8 ♖a2+ ♔b3 9 ♖a7 ♖e8 10 ♖b7+ ♔c2 11 ♖c7+ ♔d1 0-1**

*(572):* This position is hard to assess. White's king is poorly placed, trailing behind the black pawn, but on the other hand the pawn has a long way to go! Another point in White's favour is that his king is on the short side of the pawn. In fact Black is winning, but accurate play is necessary.

**1...♖f8+?**

A mistake. After both 1...♖f8+ and 1...♖e8 White has nothing better than to bring his king back. This unpins the pawn and frees it to advance, but that advance is much more dangerous when the black rook is actually behind the pawn. 1...♖e8! wins after 2 ♔f5 (2 ♔f7 ♖e6 3 ♖g5 ♖a6 cuts the king off; other 2nd moves are met by ...♔d4 and the pawn advances in any case) e4 3 ♔f4+ ♔d4! 4 ♖h1 (or 4 ♖a5 e3! 5 ♖a4+ ♔c5 6 ♖a5+ ♔b4 7 ♖a1 e2! and Black wins precisely because his rook is already behind the pawn) ♔d3! 5 ♖d1+ ♔e2! 6 ♖a1 e3!.

The other possibility, 1...♖a6+?, is also wrong as 2 ♔f5 e4 3 ♖h1 is an easy draw, e.g. 3...♖a4 (or 3...♖a3 4 ♖e1 e3 5 ♔f4 ♔d4 6 ♔f3) 4 ♖e1.

**2 ♔g5! e4 3 ♔g4+!**

3 ♔h4+? ♔d4! 4 ♖a5 (4 ♔g3 ♔e3! transposes to the following note) ♖g8 cuts the king off and wins easily.

**3...♔d4 4 ♖h7?**

4 ♖a5! starts the sideways checks without delay, and draws comfortably, e.g. 4...e3 (4...♖d8 5 ♔f4) 5 ♖a4+ ♔d3 6 ♖a3+ ♔d2 7 ♖a2+ ♔c1 8 ♖e2.

**4...e3 0-1**

Black wins after 5 ♔g3 (5 ♖a7 e2) e2 6 ♖e7 ♔d3! 7 ♖d7+ ♔c2 8 ♖c7+ ♔d1 9 ♖d7+ ♔e1.

*(573):* Yes, White can win. Here Black's king is unfavourably placed on the long side of the pawn, so Black is reduced to checking on the short side. The key position in the ensuing play is diagram 485, which shows that White wins if he gets his pawn to the fifth rank with his rook on f7. This holds true whether or not it is his turn to move. As usual, it is better to cut Black's king off on a rank rather than a file, so occupation of the seventh rank by the white rook is crucial (with f7 being the optimum square).

**1...♖b1**

There is nothing better, e.g. 1...♖b8 2 ♖e7! ♖f8+ 3 ♖f7! (3 ♔e6? ♖h8! 4 e5 is a draw because White's rook occupies an inferior square: 4...♖h6+! 5 ♔f5 ♖h5+! 6 ♔f6 ♖h6+! 7 ♔g5 ♖h1 8 ♖g7 ♔d5) ♖h8 4 e5 and White has reached his target position.

**2 ♖d5**

This loses time as Black can force a repetition of position. 2 ♖e7! is the correct continuation, cutting off the black king along a rank and heading for f7. Then 2...♖f1+ (2...♖h1 3 ♖f7 ♖h6+ 4 ♔f5 ♖h5+ 5 ♔e6! ♖h6+ 6 ♖f6 wins as in the main line of this note) 3 ♔e6! (3 ♔e5? ♖h1 draws) ♖h1 4 ♖f7! (4 e5? ♖h6+ is a draw as in the analysis of 1...♖b8) ♖h6+ (otherwise White plays e5) 5 ♖f6 ♖h8 6 e5! ♔c7 7 ♔e7 wins.

The text-move looks wrong because a one-file cut-off doesn't offer very many winning chances, even with the defending king on the long side. Diagrams 500 and 501 demonstrate the defender's drawing chances. The text-move does not throw the win away entirely, but White must be prepared to backtrack.

**2...♖b4**

2...♖e1 3 ♔f5 ♖f1+ 4 ♔e6 ♖h1 5 ♖f5 ♖h8 6 ♔e7! ♖h7+ 7 ♖f7 ♖h5 8 ♔e6 wins as in the previous note.

**3 ♔e5?**

This move actually gives the win away. 3 ♔f5? is also bad, as 3...♖b8! is exactly diagram 501. 3 ♖e5! still wins.

**3...♖b8!**

The only drawing move, preparing to check from the front.

**4 ♖d6+**

Or 4 ♖d1 ♖e8+! 5 ♔f5 ♖f8+! and White cannot make progress.

**4...♔c7?**

This loses fairly simply, so Black should have chosen 4...♔c5! purely by a process of elimination. However, the resulting draw is far from simple as it depends on a knowledge of the reciprocal zugzwang of diagram 494: 5 ♖h6 (5 ♖f6 ♖h8! 6 ♔f5 ♖h5+! 7 ♔g4 ♖h8 and White is not making progress) ♖f8! and now we have diagram 494 with White to move.

**5 ♖d4**

Now the pawn is defended, so Black is deprived of his main defensive resource – checking from the front.

**5...♖h8**

After 5...♖e8+ 6 ♔f6 ♖f8+ 7 ♔e7 ♖f4 8 ♖d7+ ♔c6 9 e5 ♖h4 10 ♖d1 Black is reduced to a hopeless attempt to check from the short side.

**6 ♔f6 ♖h4 7 ♔g5**

Now the pawn advances.

**7...♖h8 8 e5 ♖f8 9 e6 1-0**

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